

THE ARCHITECT & BUILDING NEWS

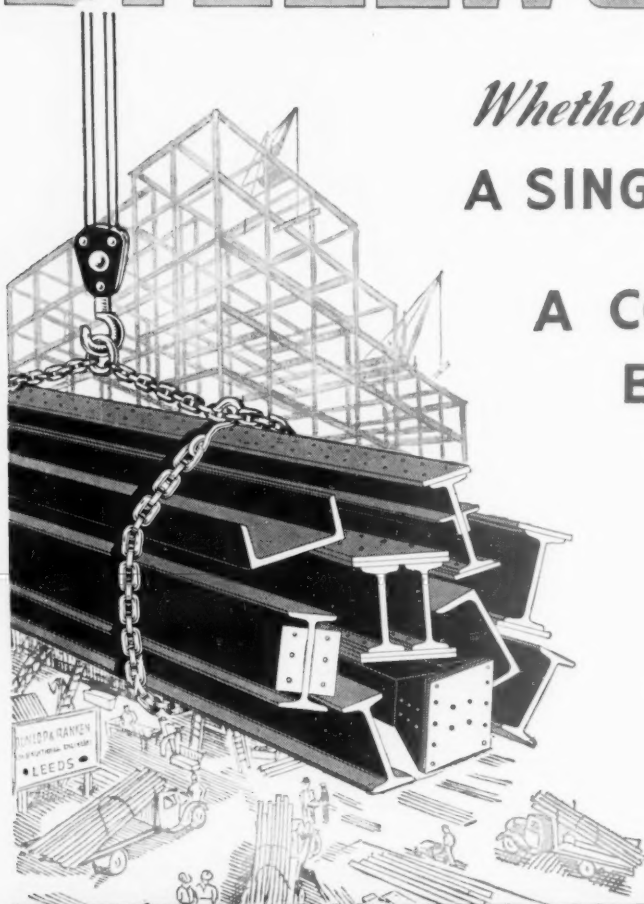
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- ARCHITECTURE OF TRANSPORT EXHIBITION
- SHOP FRONT AT UXBRIDGE
- HOUSES FOR CABINET MINISTERS, ACCRA

MARCH 2, 1951 · VOL. 199 · NO. 4289 · ONE SHILLING WEEKLY

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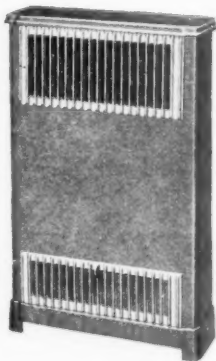
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For Shops, Offices and the
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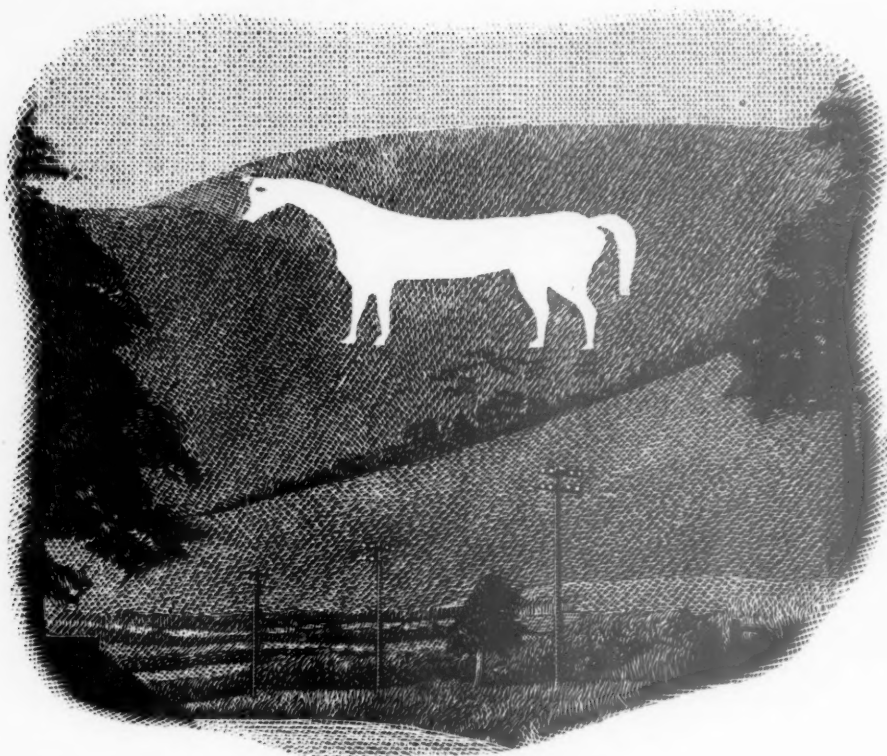
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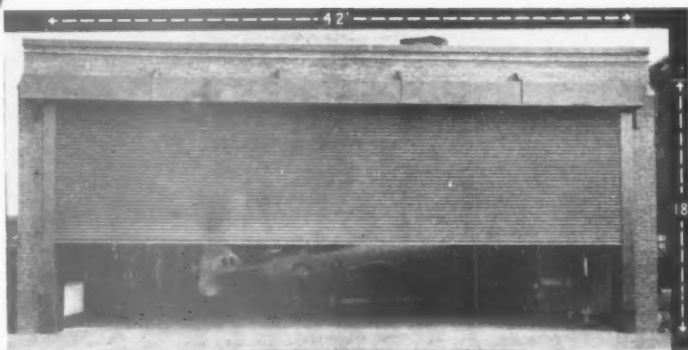
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This Brady project, 42' x 18' is an object of interest in Montreal, commercial capital of the Dominion, headquarters of the C.P.R., where it is one of the largest 'rolling doors' ever planned and created.

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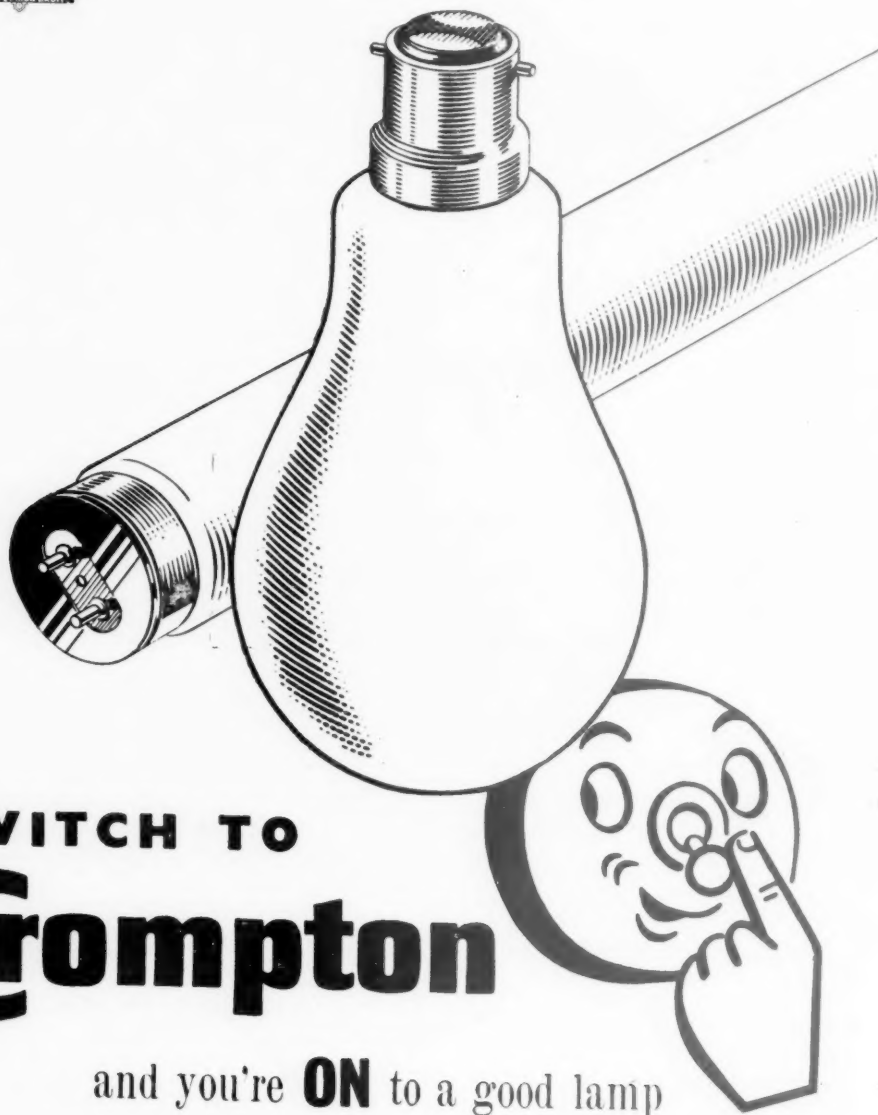
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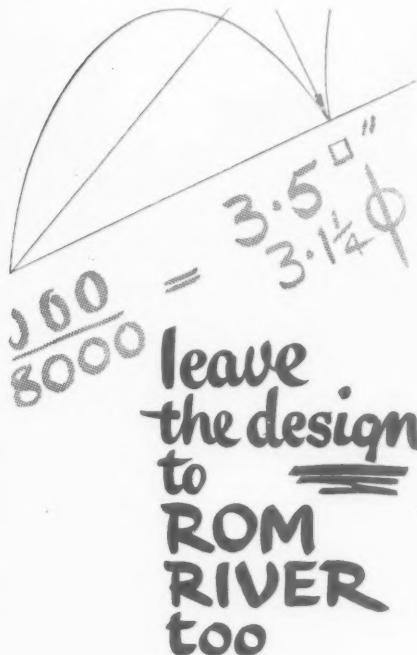
★
The cast-iron treads and landings ensure a life as long as the building itself. Cast lasts.

★
The fire - escape stairs shown here are typical of many made and erected by Lion Foundries.

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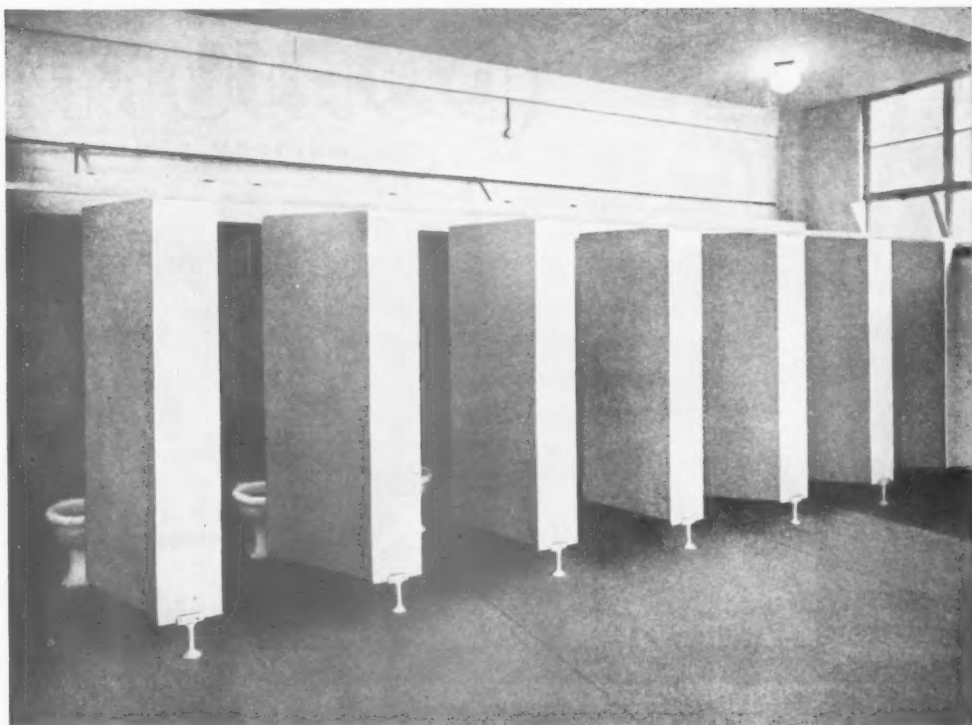
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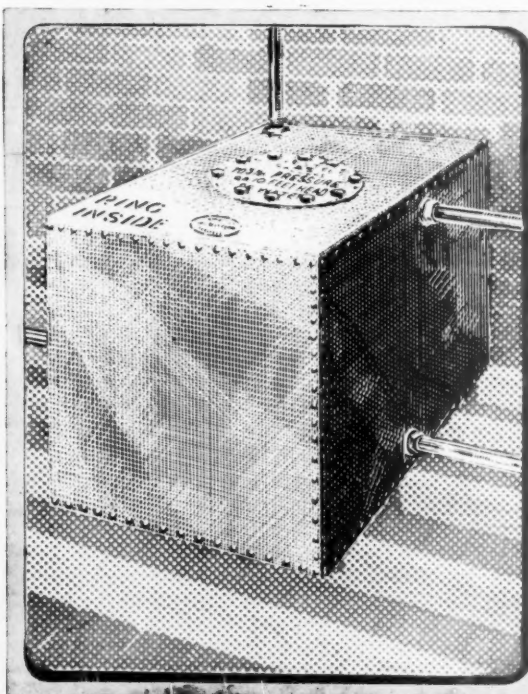


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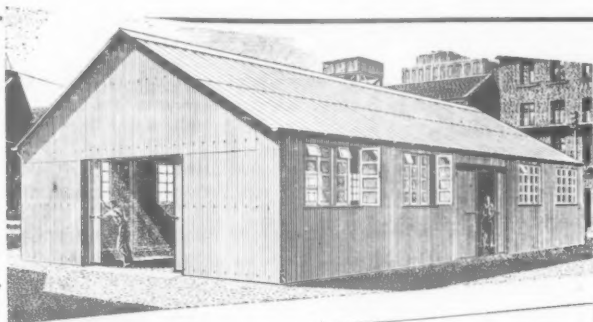
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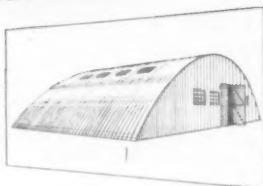
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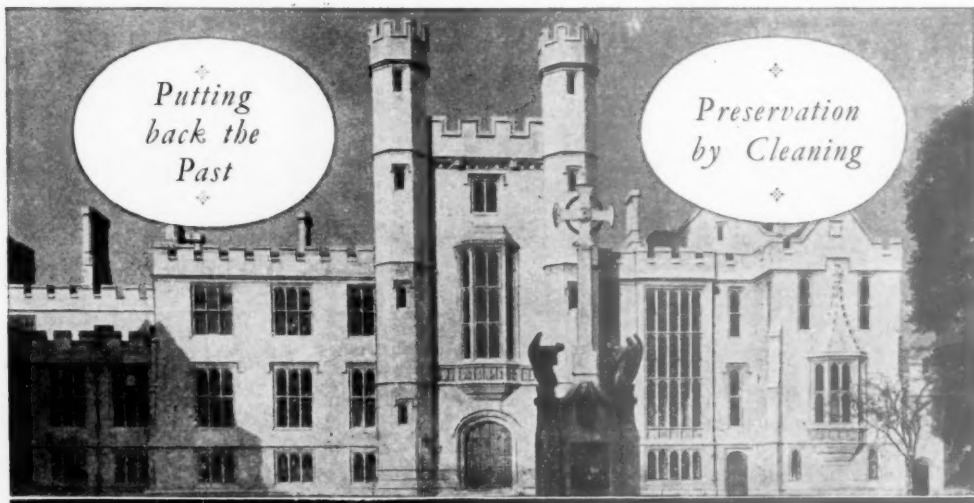
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damp walls . . .



to seal
concrete roofs . . .

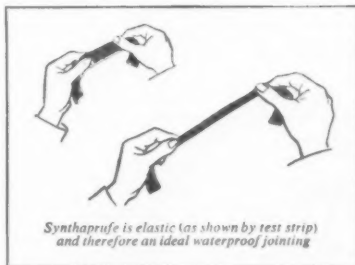


to waterproof
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forms an elastic, adhesive,
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containing rubber



Synthapruf is elastic (as shown by test strip)
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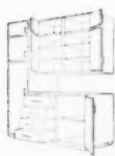
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SYNTHAPRUF CONTAINING RUBBER

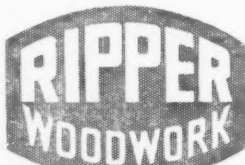
Manufactured by the  **National Coal Board**

Synthapruf is a product of British Coal. Further details, and advice on any technical problem, will gladly be given on application to the National Coal Board, By-Products, N.P. Bank Buildings, Docks, Cardiff



These illustrations show typical Ripper productions built to B.S.I. specifications and Architects requirements.

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DOOR & WINDOW
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NEW OFFICES for the DIRECTOR
OF PUBLIC PROSECUTIONS

(featured in this issue) to
the specification of the
Architects, Messrs. Sydney
Clough, Son & Partners,
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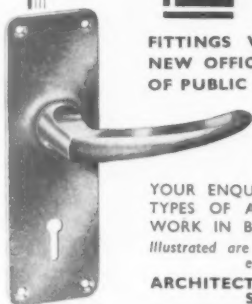
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THE ARCHITECT & BUILDING NEWS

March 2, 1951.

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid; U.S.A. and Canada \$9.00. Published by ILIFFE & SONS LTD., DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1. Telephone: WATERLOO 3333 (50 lines). Telegrams: "ARCHITONIA, SEDIST, LONDON."

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LONDON TRAFFIC CONGESTION

THE Report of the London and Home Counties Traffic Advisory Committee, issued last week by the Ministry of Transport,* should prove to be a major source of discussion and, it is to be hoped, action, for some time to come.

The Report results from the work of a sub-committee set up by the twenty-five-year-old Advisory Committee. The sub-committee consisted of eight members, started work in the middle of March last year, held thirty-three meetings in ten months and got its report accepted, printed and published within eleven months. In comparison with many other investigations conducted by Government Departments since the war this achievement must constitute one of the most vigorous and speedy pieces of important work yet carried out. In addition, the Report is couched in clear and concise language; spades are called spades and circumlocution of all kinds is conspicuous by its absence.

For all these things the Advisory Committee and especially its sub-committee, are to be congratulated. The diagrams are obviously hurried and are sketchily drawn, but they are adequate and, with the tables, well illustrate the Report.

The terms of reference were simple—"to consider traffic congestion in inner London, with particular reference to parking problems"—and within them the sub-committee has done a good job of work.

Before, however, making any particular comments on the Report it is well to point out that it is, professedly, only concerned with relatively short-term

alleviations of congestion. The Advisory Committee has viewed the whole matter, as it presumably is justified in assuming it must, from its own standpoint. There were, for example, no town planners included in the membership of the sub-committee, although some evidence was taken from the Planning Department of the L.C.C. The result of this concentration on the isolated factors of a particular problem has been partly to lose its relationships with the over-all planning problems of London—taken as a single overgrown and super-congested conurbation. To illustrate this point, by two extremes, we can note that traffic congestions, both passenger and goods, caused by the eight major terminal railway stations of the area are scarcely touched upon, while the pros and cons of putting pedestrian railings along the footway curbs of main roads is not mentioned.

That the Committee realises that such vital co-ordination is important and that integrated planning is necessary shows up when the Report refers with "very great concern and some misgiving" to the recent decision to abandon the "A" ring road project of the County Plan and proceeds to express the view that the eleven miles of road it involved "would have been cheaper to construct than to carry out the several improvements necessary (now) within the circle, and would have had a potential value as a means of reducing the heavy toll of road casualties in London". This is a strong indictment and merits further investigation by an appropriate over-riding authority, at the very highest level.

Again, the Committee notes the particular acuteness of congestion "in the neighbourhood of the larger markets, such as Covent Garden and Spital-

**London Traffic Congestion*. H.M.S.O., 1951. 2/- net.

fields, where the business that is now transacted has far outgrown the premises provided and, indeed, the streets which surround them". The Report goes on to note that re-siting of these markets is receiving attention, but it has to leave the matter at that point.

Major congestions are, and the Report makes this very clear by implication, the result of major town-planning problems; the latter are being continually shelved or have been so thrust aside, in spite of the various London Plans, of the knowledge of town planners and of an increasing need for intelligent action.

To stress this viewpoint is not to belittle the present Report; we mean, rather, to punch home the contrast between its direct attack and its demands for immediate action and the slow unco-ordinated and even empirical opportunism of planning progress in London.

If the traffic of London is stopped or even further slowed down, it is no good continuing to talk about post-war drives, housing expansions and the like—the talk and any attempts to implement it will only make congestion worse confounded.

Already, as the Report says, the cost of traffic delays (upon which, incidentally, much more factual information is required) is so vast that the suggested total cost of the improvements immediately required

and as set out in the Report, namely £19,000,000 over a period of five years, is made to look a mere trifle. For it was asserted in the County of London Plan, even as long ago as 1943, that traffic delays within three miles of Charing Cross cost over £11,000,000 a year. The present Report gives further examples: the cost of the delays at St. Giles Circus amount to some £200,000 a year; bus services lose thousands of schedule-miles a day and at five main-road junctions of the central area calculations show that a quarter-of-a-million vehicle-hours can be lost per annum during normal working hours alone.

Add to all this the repercussions of these central delays on the whole built-up area, nervous strain and frustration, loss of life and limb and of national wealth and some sort of picture will be conjured up of the need for general planning and for taking a little advice from any experience or knowledge that is available. Not to do so might either be due to congenital human laziness, post-war lassitude, senile decay or the sheer weak-mindedness of incipient imbecility. The Advisory Committee's Report seems to us a start, at any rate, towards proving that we need not yet conclude that these possible assumptions are the real causes for postponing adequate action.



FROM THE ARCHITECTURE OF TRANSPORT EXHIBITION
New Terminal Station, Rome. Architects: Fadigati, Castellazzi, Vitellozzi, Pintonello, Calini and Montuori

EVENTS AND COMMENTS

A MUSEUM OF CARRIAGES

MY recent paragraph on a proposed transport museum at Nine Elms has prompted a reader to draw my attention to a Museum of Carriages at Maidstone. This collection, which I believe was begun by Sir Garrard Tyrwhitt Drake, is housed in the Archbishop of Canterbury's stables and includes more than thirty carriages of all sorts and ages. There are also a number of models and a section devoted to accessories such as harness and liveries. The museum is open on weekdays from 10 to 1 and from 2 to 5.

People who saw the coronation procession will remember the splendid coaches and liveried servants of some of the peers. These *équipages* must still exist and I hope very much that if they are not to be used again they will eventually find their way into some collection open to the public.

The preservation of the more ordinary and modern horse-drawn vehicles does not seem to be so well looked after. The common milk-float with embossed brass churn is almost extinct but I wonder whether anyone has thought of preserving one? The decorated hay wain, the coloured tumbrel, the two-wheeled butcher's cart and even the pantechicon are all rarities; they should also be museum pieces.

ARCHITECTURE GYPSIES AND CIRCUSES

FROM time to time I have commented on architects who have "taken the wrong turning," not, let me quickly add, in the generally accepted meaning of the term. Mr. Anthony Hippisley Cox is one of them. His experience has been as varied as any. From the A.A. School he went to film sets and then to Harper's Bazaar. He served in the R.N.V.R. in destroyers during the war and then, via the feature editorship of the *News Chronicle*, arrived on some kind of Festival of Britain and C.o.I.D. Combined Staff. Others may have followed this road but few, I imagine, have had collateral interests in circuses and gypsies. Mr. Hippisley Cox once trained his own team of performing cats — Cox's Catrobs — to see whether in fact it could all be done by kindness. They performed with some success in a circus and at a smart restaurant. His interest in circuses, however, goes beyond performing cats, and he can talk for hours on circus history, architecture, gossip and reminiscence. Mr. Hippisley Cox also knows a good deal about gypsies and is reputed to speak their language. So varied a life makes architectural practice in 1951 look just a little drab.

BUSES ON THE THAMES

AS a keen supporter, but non-user, of Thames Water Buses, I am pleased to see that no less than seventy craft will be operating either on scheduled services or special trips during the Festival. There are still quite a number of people who think that some of London's traffic problems could be alleviated by greater use of the river. Everyone knows that the traffic is becoming worse. The latest report on the subject goes so far as to predict that it will come to a grinding stop if something is not done soon. I have not seen this report although I galloped to the Stationery Office for a copy as soon as I heard about it. It had never been heard of there, but I believe that it has arrived by now. A



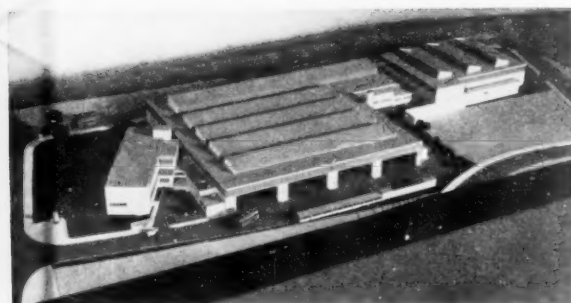
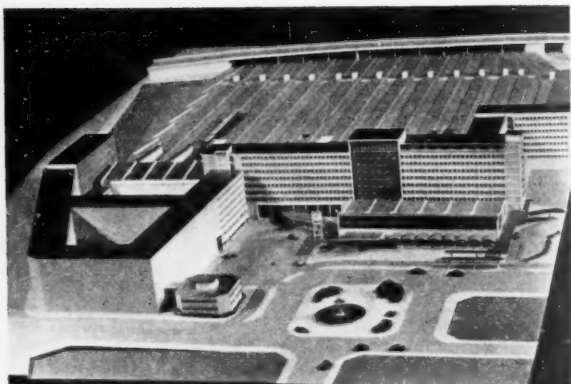
Mr. Wallace Harrison in addition to reading a paper at the R.I.B.A., visited the F.O.B. Site and is shown above in the Character & Tradition building, looking rather allergic to doves.

number of road improvements are suggested as vital and reasonably priced; that at St. Giles' Circus, where the worst delays are said to occur, is to cost a mere £2,500,000. Experiments with garages under the Royal Parks are also suggested. It is interesting, and also rather disgraceful, that no major street improvement has been made in the centre of London since Kingsway was laid out in 1905.

I wonder what will really happen? If the traffic does stop I hope I am there to see it. Perhaps Professor Richardson is right after all in his contention that pedestrians should promenade at roof level leaving the full width between buildings to wheeled traffic.

HOUSING NEEDS OF THE OLD

ON another page you will find a statement from the R.I.B.A. about a discussion on Housing Needs of the Old, which will take place on Friday, April 13, at 2.30 p.m. A small exhibition which starts on that day will remain open until April 28. You will remember that the A.B.S. centenary appeal was made for money to build this type of accommodation for needy architects. This appeal has so far brought in just over £6,000. Quite a sum in itself, but when it is realised that there are 16,000 architects on the register it does not seem that they have been over generous. The appeal was for £50,000 and many architects who intended to subscribe



TRANSPORT AT THE R.I.B.A.

Top model: The new Central Station at Oslo, now under construction. Architects: Engh and Quam.

Below: Model of Loughton Bus Garage for London Transport. Architects: Yorke, Rosenberg and Mardall, F.F.R.I.B.A.

may have forgotten. It is not yet too late. The R.I.B.A. would like to receive particulars of schemes for building, or conversions designed specially for old people.

TRANSPORT AT THE R.I.B.A.

EXHIBITION openings at the R.I.B.A. tend to become more and more like the private view of the Royal Academy. The screens of pictures merely hampering the circulation of the distinguished and not-so-distinguished. It is quite impossible to offer any serious appreciation of an exhibition after seeing it on such an occasion. I caught a flashing glimpse here and there and saw enough to be convinced that more than one more visit would be necessary. I saw some designs for small stations on the Great Western which, if actually built, will cause me to change my tune about British Railways. It is an odd thing that one firm of caterers seems to have the monopoly of supplying refreshments to all organisations connected with architecture and industrial design in London. I do not complain of the quality or quantity, but it does become monotonous across the years. The secretaries of the various organisations could at least meet and agree to differ on types of sandwiches.

ST. ALBANS GASWORKS AGAIN

COMPROMISE is seldom successful in planning and it is small comfort to hear that the extension of St. Albans Gasworks, about which there was a row and a public inquiry last August, is to proceed in modified form. The producing plant is to have only one-third of the capacity originally proposed and the gasholder size is reduced by a half. Every effort is to be made to site additional plant, when it becomes necessary, elsewhere. The buck is thus neatly passed to posterity. The Gas Board, after consulting the Royal Fine Art Commission and the local planning authority, is to obtain the approval of the Ministry of Local Government and Planning and the Ministry of Fuel and Power for the design and layout of the buildings. Trees are to be planted and the local planning authority is to be asked to choose the colour for the paint on the gasholders. And now what about Oxford?

TOKENS OF REGARD

WHATEVER the aesthetic value of exquisitely modelled groups of Crimean or Indian Mutiny soldiers, horses and guns in solid and massive silver, I find them splendid in the setting for which they were intended. The Headquarters Mess of the Royal Regiment of Artillery at Woolwich has recently been completely redecorated. It is an impressive place and the *mise en scène* of its dinners is, I imagine, almost unique in the modern army. The Royal Regiment possess a large number of such trophies and it is interesting to note that nearly all of the largest ones were presented to groups of officers by other groups of officers "as a token of esteem and regard."

GEORGE SQUARE, EDINBURGH

THE Student Architects Group of Edinburgh University have produced a supplement to the University paper *The Student*, in which they set out reasoned criticisms of the proposals for the development of the University with particular reference to the recent competition won by Mr. W. Ramsay. They also put forward their own plan. It is all very spirited and includes some rude remarks about the winning design and some praise for one of the non-winners. Like most student schemes, the suggested changes are sweeping and expensive, but their criticism is both constructive and well-timed.

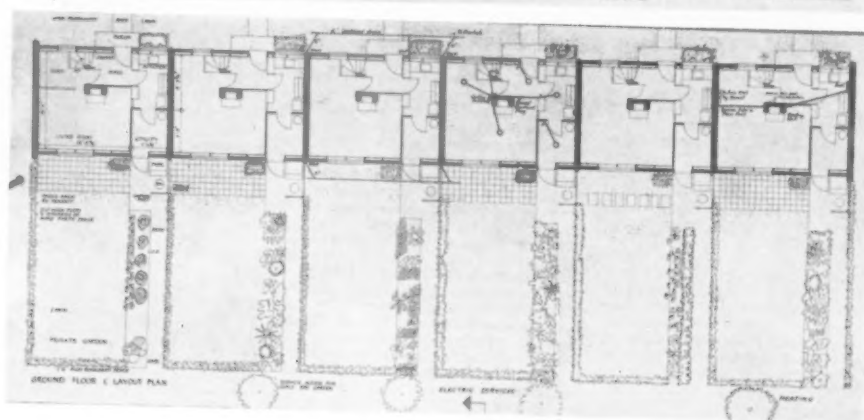
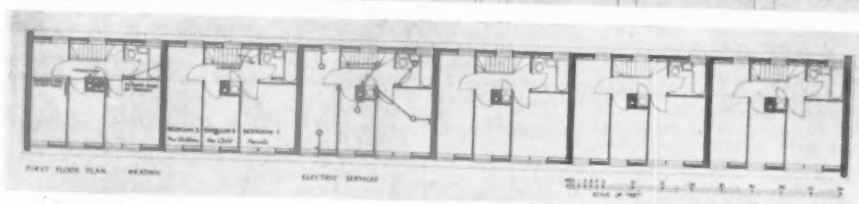
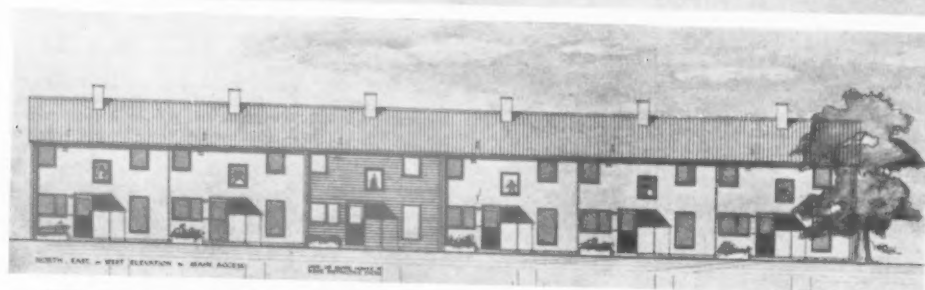
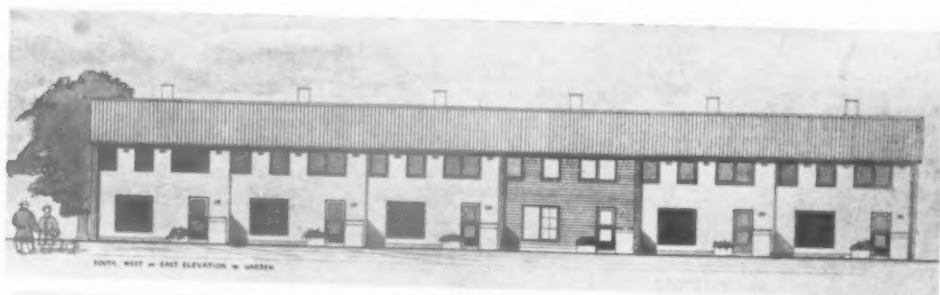
SOMETHING TO LOOK FORWARD TO IN 1952

HOTELYMPIA, to be held at the beginning of 1952, will have as its main feature the "'Salon Culinaire de Londres' where the artistry of chefs of international reputation will be displayed on a scale not approached for fifteen years." I have only two observations to make on this exciting prospect. First, that it seems to show a wholly unwarrantable optimism about next year's rationing prospects, and secondly, that the geniuses concerned might spend their time more usefully teaching their lowlier brethren how to cook cabbage properly.

THE BUILDER COMPETITION

EXTREME pressure of work prevented my seeing the preliminary exhibition of the entries for the Builder Competition. My general comments must therefore wait until the second showing at the Housing Centre, which will be from March 5-17.

ABNER



design submitted by G. Grenfell Baines, A.R.I.B.A., A.M.T.P.I.

THE BUILDER'S LOW COST HOUSING COMPETITION

NEWS OF THE WEEK

Royal Academy Summer Exhibition

The following dates and times have been fixed for the reception of works: Water Colours, Pastels, Miniatures, Paintings in Tempera, Black and White Drawings, Colour Paints, Engravings and ARCHITECTURAL DRAWINGS—*Thursday, March 22, from 8 a.m.-7 p.m.*

Oil Paintings—*Saturday, March 24, 8 a.m.-3 p.m., and Tuesday, March 27, 8 a.m.-7 p.m.*

Sculpture—*Wednesday, March 28, 8 a.m.-7 p.m.*

All works must be delivered at the Burlington Gardens entrance. The frames of Architectural Drawings must not exceed 2 in. in breadth. Preference will be given to Geometrical Drawings not exceeding 4 in. scale. Small photographs of Architecture and Architectural Sculpture not exceeding "half-plate" size will be admitted, but only in connection with working drawings and included in the same frame. Architectural Drawings which are the work of an Artist other than the Designer must have the names clearly inscribed on the mount, as follows: "Designed by . . . Architect; drawn by . . ." but the Draughtsman's name will not be included in the Catalogue. A piece of Decorative or Monumental Sculpture may be accompanied by an explanatory drawing of not more than 10 in. by 6 in., which must be framed and glazed.

Labels and forms can be obtained from the Academy, from The Secretary, Royal Academy of Arts, Piccadilly, W.1. Applications should be accompanied by a stamped addressed envelope. The exhibition opens on Saturday, May 5.

Housing Needs for the Old

The Architects' Benevolent Society has just celebrated its centenary and hopes when funds permit to build and endow homes for its beneficiaries. The R.I.B.A. feels that this is therefore a suitable opportunity to have on view a small Exhibition designed to show the progress that has been made in providing accommodation for old people. At the same time it has also been decided to hold a discussion meeting on "Housing Needs of the Old" in order to provide an opportunity for the exchange of views between architects and representatives of the voluntary and statutory bodies concerned with this important work. In this way it is hoped to focus attention on an urgent problem at a time when a possible reduction in the building programme may tend to restrict the provision of this type of accommodation. Different aspects of the problem are to be covered by three speakers and there will be an opportunity for questions and discussion at the end of the meeting.

The meeting is to be held at 66 Portland Place, W.1, on Friday, April 13, 1951, at 2.30 p.m. Mr. H. S. Goodhart-Rendel, F.R.I.B.A., will be in the chair and the following have agreed to speak: Sir Edward Bligh, Chief Officer of the Welfare Department of the L.C.C.; Mrs. M. M. Hill, Chairman, Hornsey Housing Trust and of Hill Homes;

A. Llewellyn Smith, M.B.E., B.A. (Oxon), F.R.I.B.A.

The R.I.B.A. hopes that the meeting will be well supported by architects as it hears that representatives from many of the bodies concerned with housing old people are intending to be present and a useful discussion should therefore ensue.

It would be appreciated if those wishing to attend would let the Institute know as soon as possible. Tickets and programmes are available free on application to the Secretary, R.I.B.A., 66 Portland Place, W.1. (Envelopes should be marked "Housing Needs of the Old").

The Exhibition will be on view at the R.I.B.A. on the day of the meeting and until April 28 and will comprise a small introductory historical section, the main part, however, being devoted to more recent schemes with particular emphasis on the different types of accommodation, including conversion schemes, required to meet the varying needs of the old. Also included will be some examples of new projects such as those specially designed for the New Towns.

In collecting material for the Exhibition, the Institute is most anxious not to overlook any schemes or conversions of special interest that have been undertaken recently, but which may be little known. The Institute will therefore be glad to have particulars of any such schemes, which have been designed to meet specific problems in relation to housing old people. Information should be sent to the Exhibitions Officer at 66 Portland Place.

Oxford Summer School

Architectural History and Measured Drawing

From July 21 to August 4, 1951, students of architecture will have an opportunity to study and measure many examples of historic English architecture in the University City of Oxford and to live in college at Magdalen.

Arrangements have been made for students who, instead of studying one particular work, may wish to study form and construction, entailing the preparation of measured sketches, and of some finished drawings, of such features as doorways, wrought iron work, and fittings in College Halls and Chapels.

During the Course distinguished architects and specialists will lecture on specific aspects of Oxford buildings.

There will be tours to the Cotswolds and to Blenheim Palace.

As the Course forms part of the official Festival of Britain programme of Oxford, a number of places will be reserved for members and students of the Architectural profession from overseas.

Further details and application forms can be obtained from the Joint Honorary Secretaries of the Organising Committee. Their addresses are: E. Lasseter, L.R.I.B.A., Hon. Secretary of the Berks, Bucks and Oxon Architectural Association, Somerset House, Reading (Tel. 60076); J. Brosgall, Secretary, Southern Regional Council for Further Education, Shire Hall, Reading (Tel. 3081).

★

A supper of the Architecture Club

was held at Chez Auguste, Soho, on Wednesday, February 21, followed by a debate on the proposition that "the Street is still the most important element in Civic Architecture."

Viscount Esher presided and the debate was opened by Dr. Thomas Sharp, M.A., D.Litt., M.T.P.I., L.R.I.B.A., F.I.L.A., and Mr. Peter Shephard, B.A.R.C.H., A.R.I.B.A., A.M.T.P.I., A.I.L.A.

★

F.O.B. Exhibition in Edinburgh

A "Living Traditions" exhibition of Scottish Architecture and Crafts will be held in the Royal Scottish Museum, Edinburgh, from June 25 until September 8.

Sir Frank Mears, R.S.A., is Chairman of the committee organising the architectural side of the exhibition, which will be designed by Mr. Robert Nicholson.

The architectural exhibits will be represented mainly as photographic enlargements 8 to 10 feet high, but will include large models, and their combination with crafts exhibits is intended to emphasise the interdependence of craftsmanship and architecture.

★

On Saturday last the Minister of Education, the Rt. Hon. George Tomlinson, M.P., formally opened the new L.C.C. school for physically handicapped girls, Staplefield Place School, Haywards Heath, Sussex.

The Architect to the L.C.C., Mr. Robert H. Matthew, is responsible for the extensive alterations to adapt the house, which was built in 1911 to the needs of a school to give the girls, who are all physically handicapped in some way, as nearly as possible a normal education and to fit them for as full an adult life as possible. Work on conversion commenced in October, 1949. The contractors were Messrs. Hode & Taylor Ltd., of Horsham.

ANNOUNCEMENT

Mr. Denis Harper, B.A.R.C.H., Ph.D., F.R.I.B.A., A.M.T.P.I., A.I.L.A., and Mr. J. P. Thompson, A.M.I.C.E., A.F.R.A.E.S., A.M.I.S.T.R.U.C.T.E., have become Associates in the firm of Norman & Dawbarn.

OBITUARY

The death was announced on February 20, of William Gordon Sellers, B.A.R.C.H., A.R.I.B.A., at Wirral.

The death was announced on February 27 of Mr. J. C. Soutar, F.R.I.B.A., of Hampstead Garden Suburb.

The death was announced on February 26, of Albert Anthony Fillyard, A.R.I.B.A., F.S.I. of East Preston.

COMING EVENTS

Royal Institution of Chartered Surveyors
● March 5, at 5.30 p.m. Ordinary General Meeting. "The Revision Problem in the Ordnance Survey." Speaker: Major-General R. Li. Brown.

Institution of Structural Engineers
● March 8, at 5.30 p.m. "Special Treatments for Portland Cement Concrete." Speaker: C. L. aCourt.

On the Air—Third Programme
March 4. "Rebuilding in the East End." Speaker: Professor W. G. Holford.

IN PARLIAMENT

Colonial Office Plans Revised

THE Government's decision on the revision of the plans for the new Colonial Office was communicated to the House of Commons on February 20 by the Minister of Works.

Mr. Stokes said that, in view of the public interest that had been shown in this matter, and of the views expressed in both Houses of Parliament, the Government had reconsidered the plans for a building on the sites of the old Westminster Hospital and the Stationery Office. As a result the plans would be revised so as to set back the pavilions on each side of the building facing the Abbey a further 30 feet. This meant that the main face of the building would be 72 feet back from the line of the old hospital frontage, and the pavilions would be 48 feet back from that line. No change would be made in the height of the building, which was within the limits laid down in the 1947 Act. About one-third of the hospital site was to be surrendered for amenity purposes. Under the new scheme over half would be so surrendered, so that the prospect of the Abbey and other surrounding buildings would be greatly improved and it would be easier to meet possible future traffic requirements. Any further setting back would mean adding to the height of the building, which he was anxious to avoid. He was satisfied that the building to be erected on this site in accordance with the revised plans would result in a real improvement in the planning of this important area, and that the building itself would provide a headquarters for the Colonial Office of which they all might be proud.

Sir Harold Webber asked the Minister to consider again the height of the proposed building, and emphasized the importance of the Abbey and the desirability of not placing near it a building so high that it would have a detrimental effect. Mr. Stokes said that he had looked into it, and had come to the conclusion that the setting back would meet all reasonable requirements. He was very loth, he said, to interfere with the architect any more than he had done. The new building would provide about 156 fewer places than was originally intended. The revised scheme was better than what the Royal Fine Art Commission had asked for, and he did not consider it necessary to consult them again, although he was advising them of the changes.

South Bank Doubts

A progress report on work at the South Bank Exhibition, given to the House of Commons on February 21 by Mr. Herbert Morrison, Lord President of the Council, seems to indicate that the completion of the exhibition in time for the opening on May 4 is open to some speculation.

Mr. Morrison said that progress on the construction of the exhibition had been appreciably delayed both by continuous bad weather and by interruptions of work due to industrial disputes. A loss of approximately one-fifth of the total working time since last summer had been caused by bad weather. He had no similar estimate of the effects

of unofficial strikes, but these had necessarily had consequences greater than the loss of time of men actually involved. Nevertheless the Festival Office were satisfied that, given an improvement in weather conditions and no further interruptions of work, the Festival would open on the arranged date.

The underground services and the bulk of the external building work had now been completed, and exhibition display construction was proceeding in nearly all the pavilions. Bad weather had particularly delayed paving work, and if there was no improvement there would be difficulty in ensuring clean access to the buildings for the installation of exhibits. He was being kept fully informed, and while he did not underestimate the difficulties he was confident that, barring further accidents, the exhibition would open according to plan.

By way of postscript, Mr. Dodds added the observation that the previous day the chairman of the Works Committee on the site had stated that the men would do everything possible to see that the exhibition was opened on time.

Carlton House Terrace

Mr. Robson-Brown asked the Minister of Works how far the scheme for the reconstruction of Carlton House Terrace had proceeded; whether the plans had been approved by him and, if so, on what date; and how far the Government were committed to this scheme. Mr. Stokes replied that preliminary sketch plans of the scheme had been prepared and were now being discussed with the planning authority. These plans were approved by his predecessor in 1948 after they had been agreed by the Royal Fine Art Commission. The Government was committed to expenditure on architect's fees, and had spent some money on securing vacant possession of the property. (Feb. 22.)

Housing Points

It is impossible to estimate yet how much the cost of a standard size house will be increased by the latest wage award for the building industry.

The Minister will not alter the five-to-one ratio to allow a greater number of private houses to be built. He is, however, ready to consider on their merits proposals submitted by particular local authorities.

(Mr. Lindgren, Parliamentary Secretary, Ministry of Local Government and Planning, Feb. 20.)

Brigadier Clarke: Will you now allow additional building licences for people who wish to erect houses in their spare time? Mr. Dalton (Minister of Local Government and Planning): I am prepared in such circumstances to consider applications from individual authorities to increase the proportion of houses to be built under licence. (Feb. 20.)

★

A public local inquiry to hear objections and representations on the subject of the Peak District National Park (Designation) Order made by the National Parks Commission will be held at the Town Hall, Buxton, on Tuesday, March 6, 1951, at 10.30 a.m.

CORRESPONDENCE

Low Cost Housing Competition

To the Editor of A. & B.N.

Sir,—The Builder is to be complimented on its foresight in organising a competition of such a practical nature and of such current interest, and the number of entries on view at County Hall are proof of the popularity of the subject and a just reward to the organisers.

As a Housing Manager there are one or two points I should like to make. I was struck that nearly all the plans completely departed from the parlour type designs with which we have become familiar since 1945 and one which in my experience suits the needs of the average working class family and which is required and expected by each family. The second sitting room is essential for those engaged in manual work as it is not practical to suppose that wage earners returning home for the mid-day meal in dirty overalls and muddy boots should wish to sully the room in which the upholstered furniture and a carpet normally feature; likewise small children must be permitted sufficient freedom to romp and play but which may imperil the life of suites, etc. I thought these facts had been accepted. The idea of a children's den is a good one but it is likely that the working class mother will wish to keep her children in view. I do not know of a single family of all those re-housed by my Corporation since 1945 who would readily take a non-parlour type house, and of fifty families rehoused in "Howard" type prefabricated houses which are designed with a small working kitchen and a large living room—forty-nine have elected to have the large room partitioned into two smaller ones.

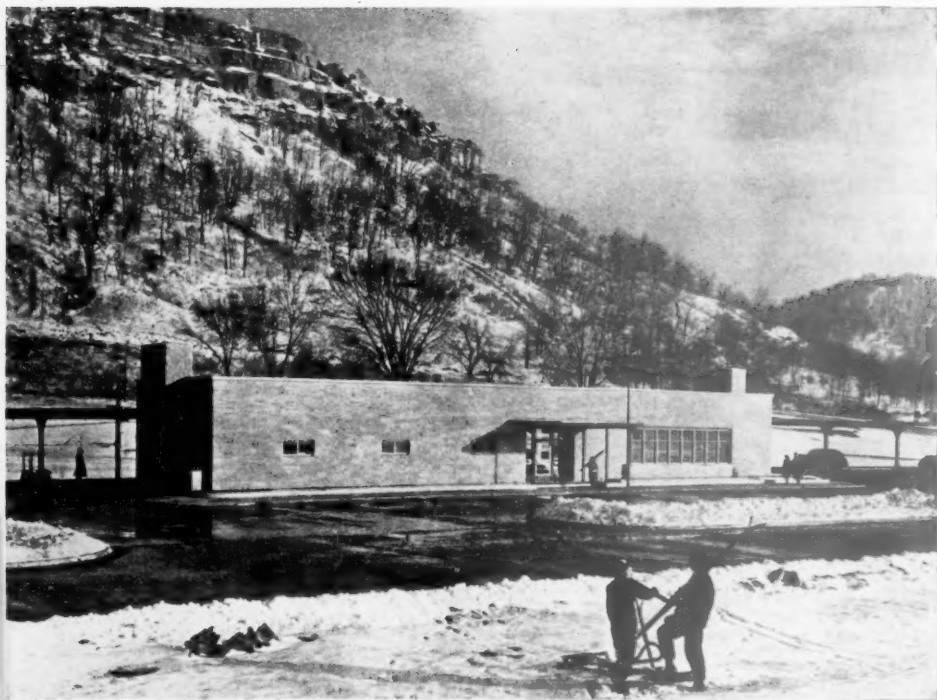
Is it practical to have the only w.c. housed in the bathroom? Does it work out satisfactorily if access to the fuel store is through another room? The winning design contained both these features; the coal man passing through the store where laundry may be hanging on the airer provided, or alternatively, going through the kitchen, seems very unsatisfactory from the housewife's point of view.

The design which appeared adaptable enough to incorporate a layout which includes the points mentioned was No. 312 by Messrs. Payne and Preece of Gloucester, but this design was not even honourably mentioned.

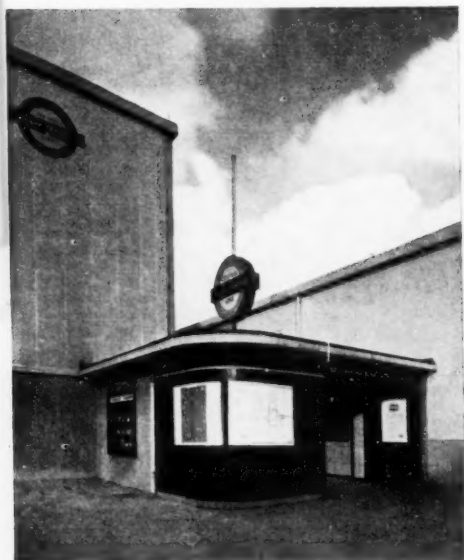
I am not speaking at all of construction, traditional methods versus non-traditional as these are not in my province, but I am interested in the type of design that shall give families their essential requirements and shall be those which by long experience have proved to be popular. For this reason I am disappointed in the assessors' awards as it does not seem to me that sufficient study has been given to the essential requirements of "the average working class family" for whom these low cost houses are intended.

I am, etc.,

M. L. KEITH,
Housing Manager, Borough of
King's Lynn.



Burlington Station, Iowa, U.S.A. Architects: Holabird, Root & Burgee

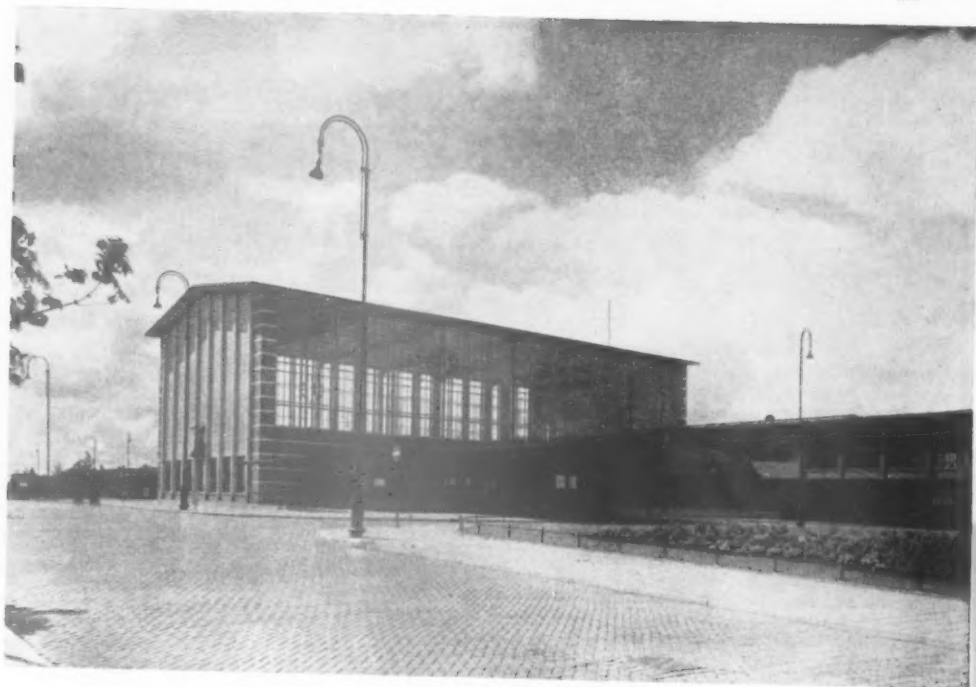


Wanstead Station, (London Transport).
Architects:
T. R. Bilbow, F.R.I.B.A., G. C. Manley, L.R.I.B.A.

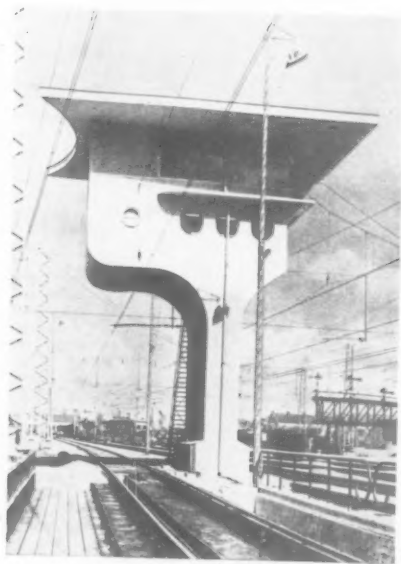


Lea Bridge Ticket Office, B.R. Eastern Region

T H E A R C H I T E C T U R E O F T R A N S P O R T



Amstel Station, Amsterdam. Architect: H. G. J. Schelling



Signal Box, Netherlands Railways.
Architect: S. van Ravesteyn.



Signal Box, Netherlands Railways.
Architect: H. G. J. Schelling.

E X H I B I T I O N A T T H E R . I . B . A .



This picture was taken at one of London's principal railway termini last week. It illustrates the importance of such exhibitions of that now at the R.I.B.A. and the need for action.

Lord Hurcomb, Chairman of the British Transport Commission opened the ARCHITECTURE OF TRANSPORT Exhibition at the R.I.B.A. on February 22. The following are extracts from his speech . . .

"It is with very great pleasure that I find myself associated with you to-day in bringing to the attention of the public this remarkable Exhibition on *The Architecture of Transport*.

" . . . Though I am myself only concerned with transport on land, by inland waterway and on the narrow seas, I can nevertheless welcome the contribution that air transport undertakings have made to this exhibition, and I am happy to see that some of our famous old shipping companies, too, are represented.

" . . . Perhaps as you look round these walls you may wonder why it is that foreign railway undertakings are able to provide so many photographs of new schemes accomplished, while British Railways are represented rather by drawings showing what it is hoped to accomplish in the future. One reason for the smaller output of new railway building in this country is to be found in the fine quality of the buildings we have inherited from the past. This heritage is too often overlooked perhaps because some of it is overlaid with later and unfortunate accretions.

" . . . Despite the admirable planning and good construction of our old transport buildings, we have to recognise the fact that in a number of cases the traffic has long outgrown the accommodation provided. Much study was given by the Railway Companies to the problems arising at such stations. British Railways, and London Transport, too, are grappling with many such problems in their drawing offices, trying to plan wisely for the years when capital investment is once again released from the stringent controls in force at the present time and when materials become more freely available. I am not sure that there is not some advantage to be gained by being a little behind some other countries in new building. When new ideas are being tested in practice, faults begin to show themselves and further improvements can be worked out.

"But British Transport is not concerned only with buildings for the public . . . London Transport have built some admirable new omnibus garages like the one at Garston, Watford. New garage building, indeed, is an activity in

which the Commission expect to be heavily engaged during the next few years.

" . . . The Commission attach the greatest importance to their programmes for modernisation and general tidying of the many buildings that remain substantially fitted for the job they have to do. These programmes are going forward at a steady pace throughout their transport system. British Railways have twelve station schemes of this kind in their programme for the current year. If there is no serious deterioration in our economic situation I think we may look forward to increased activity of this kind in 1952. The drawings of Liverpool Lime Street, Barry Town and Cheltenham St. James's which you see here will show the kind of thing they are trying to do. The aim is to provide more convenience and comfort for the travelling public and to improve station working and make it more economical and more efficient. Matters which will receive special consideration in these schemes are: the easing of the traffic flow, improved tidiness, good lighting and sign-posting, comfort in waiting rooms and refreshment rooms, cheerful colour, and advertising displays that by their orderly arrangement make a possible contribution to amenities and smart appearance.

"You will notice also, and I hope with approval, how much attention is now being given to the design of incidental line-side and road-side equipment. . . .

" . . . Looking back over the past two hundred years, we can see how fortunate it was that the great civil engineers who built the main body of our canal and railway system were all-round men with an astonishing range of capability. Many of them had been trained in the old traditions of fine craftsmanship that were still strong and undecayed in their time. Yet even they, with all their traditional understanding of formal design, felt that they needed the help of architects. I am glad to assure you that the Commission and their Executives agree that the best architectural advice must be called in at an early stage for important and public civil engineering works as well as for works of architecture proper. The Commission are also mindful that the same kind of expert attention should be given to smaller items, such as standard equipment. They have asked the various Executives, and the Executives have agreed, to give special attention to these smaller items, and generally to ensure that the whole field of formal design is kept under continuous expert supervision. . . .

"Mr. President, my Lords, Ladies and Gentlemen, I have much pleasure in declaring this Exhibition open."

The Architecture of Transport!



The photos on this page are not from the exhibition at the R.I.B.A., but were taken at one of the principal London termini last week. As a setting for a French film about crime this place would be admirable.



THE ARCHITECT and Building
News, March 2, 1951.

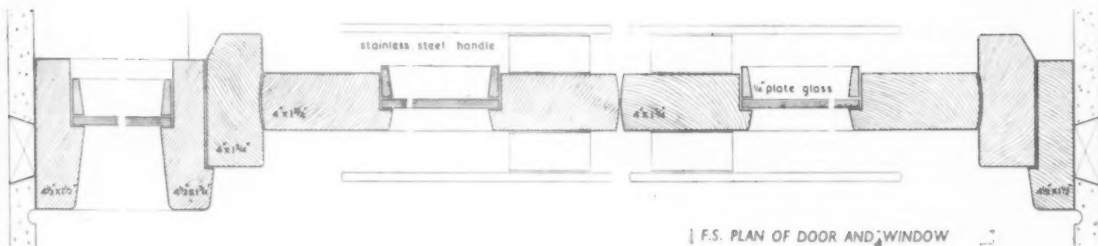


SHOP FRONT
AT UXBRIDGE

architect:
BRIAN PEAKE
F.R.I.B.A., M.S.I.A.

The mahogany fascia to the shop front is
in random widths with a pheno glaze finish.



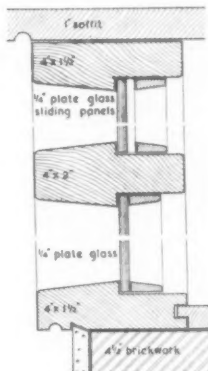


F.S. PLAN OF DOOR AND WINDOW

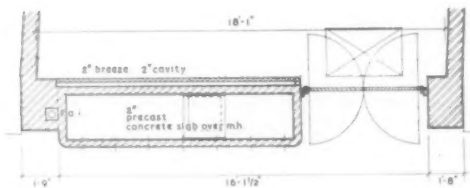
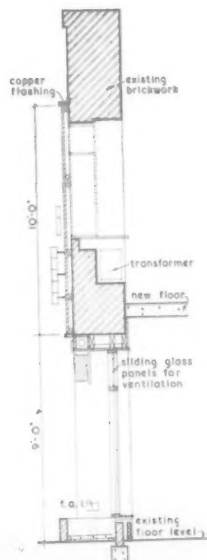
THIS shop front is part of a single floor showroom for the display of furniture and storage of stock. It has been formed by roofing over the existing ground floor walls of burnt out premises, owned by William Perring & Co. Ltd., which were destroyed during the war. The scheme is only of a temporary nature and will in the future be subject to planning control, when it is intended to build permanent showrooms on this and the adjacent site. The shop window is slightly recessed and framed in wax polished hardwood. The built-in flower box is in grey brick and is provided with a removable concrete slab for access to an existing manhole. Flanking piers are rendered white with rustic finish and have a plinth of 6 in. x 2 in. matt grey tiles. The fascia is in vee jointed African mahogany with a pheno glaze finish.

The "William Perring" lettering is cut out and the word "Perring" is fitted with neon tubing behind the letters to give a halo lighting effect.

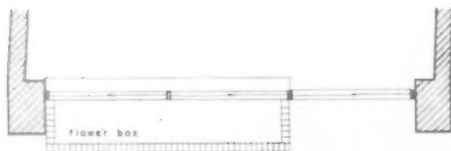
The General Contractor was Messrs. Boyd Gibbons.



F.S. SECTION THROUGH WINDOW AND SLIDING VENTILATION PANEL
(The framing is 4 1/2 inches, not 4 inches as shown on drawing above).



PLAN AT FLOOR LEVEL



PLAN ABOVE DOOR

R . I . B . A . P R I Z E S 1 9 5 0 — 5 1

Review by MAURICE E. TAYLOR, A.R.I.B.A.

ANY congratulations this year should first be bestowed upon the critic, Mr. Enthoven. In 1949 he put forward the following suggestions as advice to critics: "It is less important to the winners to know why they won than for the losers to know why they lost." He must have remembered this advice. This is unusual, as advice is often freely given but the giver rarely follows his own advice.

Not since 1938, when Mr. Ferdinand Billery was the critic, has every student whose design was exhibited received an individual criticism. Mr. Enthoven achieved what many critics would have regarded the impossible all in the space of 40 minutes. Students, you have no cause for complaint against the critic.

Everyone present, except, no doubt, some of the unlucky ones who came in for candid comment, enjoyed the criticism. It was full of advice, mingled with wit. In his opening remarks, which took just less than two minutes, Mr. Enthoven stated that the views he was to put forward were those of the forty hard-working members of the juries, to which he would "contribute no more than possibly a little flavouring or colouring matter." No one believed a word of this by the time he had finished his criticism, and I, on behalf of the students, wish to thank Mr. Enthoven for both an instructive and enjoyable evening.

No one appreciates, except those candidates who have spent long evenings on their designs or measured drawings, how much time and labour can be and is expended on their preparation. It was pleasing to note that Mr. Enthoven had appreciated this fact as he saluted all those who entered for the various competitions, as he stated: "It is not easy under present conditions to find time and energy beyond that required for a normal day's burdens." This is particularly applicable to those students who have left the schools and are anxious to compete for the post-graduate prizes.

This may be the reason why, as he himself stated, the proportion of cream to skim proved this year to be on the light side. Gone, it would appear, are the days when we could stand and admire vast strainers filled with measured drawings of cathedrals or country mansions. They took months of work to measure and draw out. No one, unfortunately, has the time under the present difficult circumstances. In this age of hurry and bustle we have lost something. As Mr. Enthoven states (he was referring to the students but on reflection it could apply to many of us past the student stage): "Many seem to find it difficult to express themselves simply and clearly, whether in their designs, in their drawings or in their writing of English."

So that he could give every student a few words of criticism on the design he submitted, Mr. Enthoven had to refrain from allowing himself to be sidetracked. He did lightly touch upon one point but did not expand it, namely

the question of the poorer quality of the work submitted. He very carefully did not ask the question which one felt he wished to ask: "What are the factors, real or imaginary, which deter a number of the abler students from competing?" It is a question the R.I.B.A. might consider. In fact, a small committee with a remit to consider ways and means of bringing the prizes to the notice of students both School and External might come forward with suggestions which would be beneficial to all concerned.

Twelve prizes were offered for competition this year and nine awards were made from amongst the 632 competitors. Of this number 483 were for the Tite Prize. This is slightly less than last year's number of 506, but when one compares it with the 211 in 1948 it is a pleasure to feel that the change in the conditions of this prize might be responsible for this increase.

As appears to have been the custom from time immemorial, the critic commenced his detailed criticism with the Tite. He reminded us that it has now been awarded on three occasions for a design not restricted to the Italian Renaissance style. It looks a very short three years.

Looking round the designs submitted for the Tite, I had the inward feeling that since the change in the conditions a certain quality, particularly in elevational treatment, had now disappeared for ever from this competition. "Whilst it still retains the title of the 'Tite,' it could be any school problem. Time marches on and I suppose we must march with it. There have been more entrants since the change. Is, however, that an advantage? Mr. Enthoven stated that "quantity was more conspicuous than quality, which can only be attributed either to a deficient diet in architectural training or existence of factors which deter a number of the abler students from competing." Quantity is not everything, particularly in architecture.

Out of 483 competitors for this prize, 11 were allowed to enter for the Final competition. The winner's drawings at first glance appeared unfinished, but on further study all one required to know was included without any fuss. I agree with Mr. Enthoven when he stated that to-day there appears to be a tendency to integrate ground floor plans and garden, which makes it difficult to read at a glance what is buildings and what is surroundings. One should not have to disentangle the plans before one can appreciate which is actually building.

A few words of criticism were given on each of the 11 designs. The advice, will, I am sure, stay with the competitor for the remainder of his life. For example (the following are taken at random from the criticism), "the boiler flue is lost sight of in the first-floor plan"; "the ladies' lavatory is so placed as to be embarrassing to users"; "he delighted in creating difficulties in order to try and solve them"; "should have spent less time on the trees and more on

the buildings"; "vast drawings showing evidence of immense effort, most of it wasted." Looking again at their schemes I have no doubt the students will say how true, and see that their mistakes are not repeated in future schemes.

This year the subject for the senior design prize, the Soane, was a Repertory Theatre in a provincial town in which plays had to be produced to cover various periods. The conditions stressed that the subject was set with a view to testing creative ability and imaginative capacity, rather than to catch out the competitor in his knowledge of tricks of production. There were 100 competitors entered for the "en loge," and ten were admitted to the final competition. Of these ten, three schemes were outstanding and the critic admitted that the Jury had difficulty in coming to a decision.

Here again Mr. Enthoven gave each of the ten final entrants a few words of criticism and advice. It is so easy to criticise but to turn the same to advice is not as easy as it sounds. In connection with the schemes submitted for this theatre, many suggestions on the design of theatres were given, and will be worth remembering by anyone who is fortunate enough to be called upon to design one for a client.

It was very encouraging to note that there were seven sets of drawings submitted for the Measured Drawings Prize. It was just like the pre-war days.

To my mind there was little doubt as to the winner. Mr. Stanley Morgan's sheets of Castle Bromwich Hall were a pleasure to inspect. He gained, to my mind, by taking one building, measuring it well and translating his measurements into a comprehensive set of drawings. The plans and elevations were to 10 feet to 1 inch, and he built up his sheets from this small scale until he finished with full size details. As the critic stated, the drawings were refreshingly free from mannerism and the lettering was unaffected. The site measurements were backed up with a separate book of developed notes, a model of its kind.

A Certificate of Honourable Mention was awarded to Mr. Peter Buttenshaw for his sheets of St. Mary Abchurch. He made two mistakes: first, by adding a sheet of a different subject to make up the permitted number and secondly, by not submitting site jottings.

The drawings of the geometrical staircase at St. Paul's Cathedral and the Tomb of Henry VII and Queen Elizabeth in Westminster Abbey were exquisitely presented. One applicant appeared to have shares in a paper mill, as he had large expanses of white paper; all the drawings on the desert of paper could have been very well laid out to better advantage on two or three sheets. It was disappointing to see how little idea many of the competitors had in the laying out and finishing off of sheets of measured drawings.

There was only one entrant for the Owen Jones Studentship, which is for

the improvement and cultivation of knowledge of the successful application of colour as a means of architectural expression. The Jury considered Mr. Lee's work of such special merit that they increased the award from £80 to £100. The drawings submitted by Mr. Lee claimed to be "an investigation into the employment of colour in architecture through visual assessment and scientific measurement to link subjective impressions with physical fact, and form conclusions." This formidable title was translated into 16 sketches of existing buildings taken from various periods, and noting the reflection factor by comparison with Mansell's colour charts, the measuring brightness of interiors in foot-lamberts, the brightness of light sources and illumination of each surface.

Mr. Lee's drawings and methods left me with the feeling that we do not give enough thought to the study of colour in both external and internal treatment of our buildings. It is to be hoped that Mr. Lee's research which he is to carry out later will be published.

It was surprising to hear that there were no entrants for either the Hunt Bursary, which is awarded for the study of housing and town planning, nor the Neale Bursary, for the measurement of old buildings coupled with research in the field of historical architecture. Two very interesting prizes and no bids. Why, I wonder? Are the various prizes not publicised sufficiently, or are post-graduate students too engrossed in day-to-day matters to have the time to enter?

The Senior Essay Prize attracted only three entrants. The subjects submitted by these were: "The Aesthetics of Rhythm," "The Education of the Architect," and "Regency Architecture in Thanet, Ramsgate and Margate." From the critic's remarks, it appeared that the entrants fell, as many have done before and will continue to do, into the writing of a thesis and not an essay. In addition, the essay should make some contribution to scholarship.

The subject set for the Junior Essay Prize, "The Development of the Medieval Market Square and its characteristic Buildings," should have drawn a larger number of entrants than it did. Only four essays were received. Mr. David Crease's essay, which I have had the pleasure of reading, was interesting and covered the subject well. The subject was one which called for illustrations but none of the entrants was very strong on this side of the essay. Do not forget, if you are thinking of entering, to add a bibliography and state whether or not the photographs were taken by yourself. Check your spelling and English.

There were eight applications for the Alfred Bosson Research Fellowships. Two fellowships were awarded, one to Mr. John Bickerdike, who proposes to carry out research in Scandinavia on the artificial and natural lighting of buildings. He has already carried out valuable research in connection with the lighting of art galleries.

The other fellowship was awarded to Mr. Leslie Mitchell, who is at present struggling with providing houses in Africa for the native. He is going to carry out research in low cost housing in the south of the U.S.A. He is hoping

to put the knowledge he gleaned in America to practical use when he returns to Salisbury. Mr. Mitchell was awarded the Hunt Bursary in 1950 and used the money to make a study of planning for the Africans, with particular reference to the planner's contribution to the reduction in cost of housing, which would satisfy the African's mode of life and his future life. The research he is now proposing is merely carrying his studies a step nearer completion. If his thesis is up to the standard of his previous studies, which ended in book form entitled "Men of Two Worlds, Rural and Urban," it should be both instructive and practical.

There were three applicants for the Athens Bursary, which was awarded to Mr. J. R. Tolson of Leeds.

The seven entrants, public and secondary schools, for the sketching prizes were refreshing, three sets being outstanding. Each of the three received £2 2s. 0d.

It was a pity the drawings were not exhibited to better advantage. It would appear that the R.I.B.A. are, like most offices, finding themselves cramped for space, as the exhibition was confined to just over a half of the Florence Hall: the remainder of the hall appeared to be littered with Testimonies of Study. After all the hours the students had put into the various prizes, it was disappointing to find their work did not receive the display it might.

Congratulations to those who won and to those who were not so successful, don't give up trying.

Address to Students

by The President,

Mr. A. Graham Henderson

THE President, in his address to students, chose the half-century as a suitable time to consider the changes which had taken place since he became an apprentice over 50 years ago. He dealt particularly with conditions both as regards training and practice over these years, and in so doing compared the losses and gains.

Entry to the profession fifty years ago was via apprenticeships. The educational side was catered for by evening classes in building construction, history of architecture, drawing and design. He felt that the student of those days qualified by a harder way than the present student. Few, however, took the examinations, which in those days were voluntary. "Statutory registration is probably the greatest step forward taken by the profession since that date," he stated.

In those days, apart from their daily office work, the students who had any ambition had two occupations: namely, draughtsmanship and competitions. Sketching added in no small degree to their personal happiness.

Dealing with the competition system, he emphasised the point that when he was a student they were the equivalent of a course in design, with the added attraction of possible substantial professional success.

Regarding their practical training, being in direct contact with actual working drawings and with work in progress, they were at a great advantage. They learned that there was a business side to architecture and by the time they had passed their professional examinations he felt that it was only fair to say that they were more fully qualified than the student of to-day, who had completed a five year course at a School of Architecture with little or no office experience.

After dealing with the factual differences in the training then and now, he posed the questions: "What about the work which we were doing in our offices?" "Insofar as it had any pretensions to being architecture, what were the controlling factors in design and what comparisons can be made with the work of to-day?"

Tradition still dominated design, low building costs permitted the elaboration of detail. Building materials were abundant and labour was cheap. There were no controls.

"What," he asked, "in comparison is the position of our art to-day? The social and economic conditions have completely changed. Scientific progress has changed our methods of construction. We have to construct with materials which are available and not with those we would like to use. We cannot afford elaborate detail. It follows inevitably, therefore, that architectural quality and the expression of this has to rely on new factors."

To-day's conditions, he felt, were a challenge to the present day students' skill, which, in his view, will help and not hinder the future development of their art.

A. & B. N. D E T A I L S H E E T S

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**Houses for
Cabinet Ministers
Accra
Gold Coast**

Architect:
F. HEATHER HUGHES
A.R.I.B.A.



THE Public Works Department of the Gold Coast Government commissioned this design for a type house which could be built for each of the Cabinet Ministers. A programme of requirements was drawn up by a panel of unofficial African advisers who were further consulted by the architect during early planning stages. Eight of these houses are now under construction and scheduled to be completed by the middle of 1952.

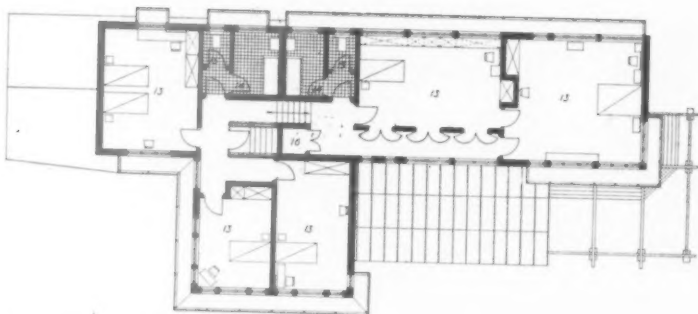
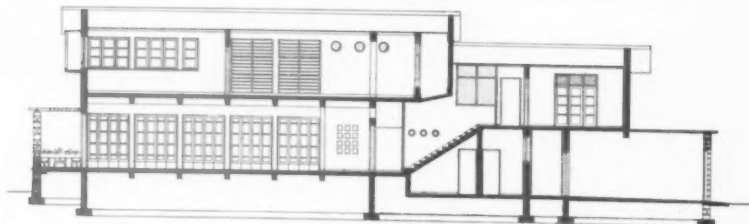
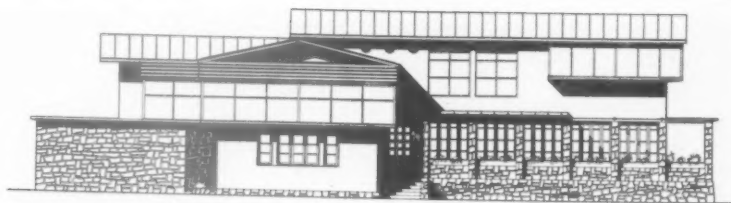
Site. The eight houses are sited about two miles from the centre of the city on a wedge of land bounded on one side by the Dodowah Road, Accra's main boulevard, and on the other by a green belt falling away for about three miles to the palm-lined beaches. The individual houses have been planned to make best possible use of the magnificent outlook over the Gulf of Guinea and of the cool breezes which blow from the sea. The T-shaped plan ensures that the main living rooms and the garden stoep are screened from the road; the houses can thus be sited close to the road leaving large clear areas for the garden layout.

Plan. The house has been designed to give to all rooms the maximum amount of cross ventilation coupled with adequate shade from the direct rays of the sun. The main living rooms and stoep have been raised four feet above ground level to catch as much as possible of the sea breeze. Entrance hall, Minister's study, kitchen and garage are all at ground level, for ease of circulation, and this has resulted in the adoption of the mezzanine type plan, a plan which not

only achieves separation of the living rooms from the working area on ground floor but also allows the master suite of bedrooms to be self-contained with its own bathroom above the level of children's or guests' rooms. The study has been planned off the entrance hall for ease of access, but is well insulated from the kitchens by the stair well. The upper floors are completely mosquito proofed, the stairs being used as the mosquito lock.

Construction. As Accra is on an earthquake belt, it was considered advisable to use a reinforced concrete frame construction. External walls are principally of 9-in. sandcrete block, cement rendered and painted white, and contrasted with areas of local stone. Internal partitions are 6-in. hollow clay block. Floors, generally, are finished with wood block and the garden stoep is tiled. Timber is used throughout for all doors and windows. Extensive use is made of louvred doors, and windows with fixed plate glass louvres to give extra ventilation. The roof is constructed with framed rafters and was designed to be covered with copper, but owing to the present restrictions, is being built with Trafford tile asbestos sheets painted black. Protection against the sun is ensured by overhanging eaves, mosquito boxes and by additional louvres where required. The mosquito proofing is cream nylon gauze fixed to wooden frames and supported by reinforced concrete canopies. Cooking is by an electric stove and there are electric water-heaters in both bathrooms.

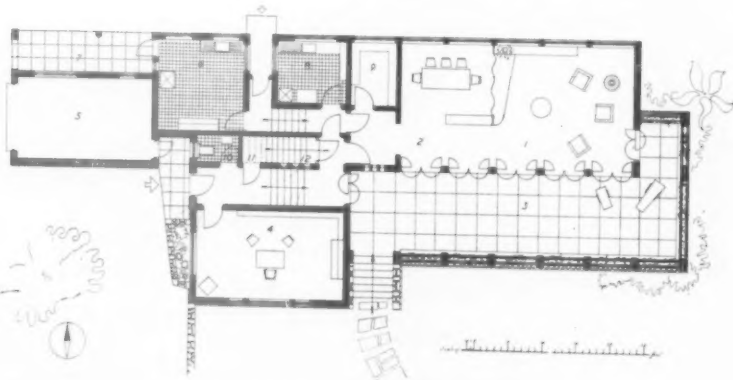




KEY

- 13. BEDROOMS
- 14. BATHROOMS
- 15. W.C.s
- 16. LINEN CUPBOARD

FIRST FLOOR PLAN



- 1. LIVING ROOM
- 2. DINING ROOM
- 3. STOEP
- 4. STUDY
- 5. GARAGE
- 6. KITCHEN
- 7. LAUNDRY STOEP
- 8. PANTRY
- 9. STORE
- 10. CLOAKROOM
- 11. CUPBOARD
- 12. MOSQUITO LOCK

GROUND FLOOR PLAN

Work at Nos. 11, 12 and 13 Buckingham Gate S.W.1

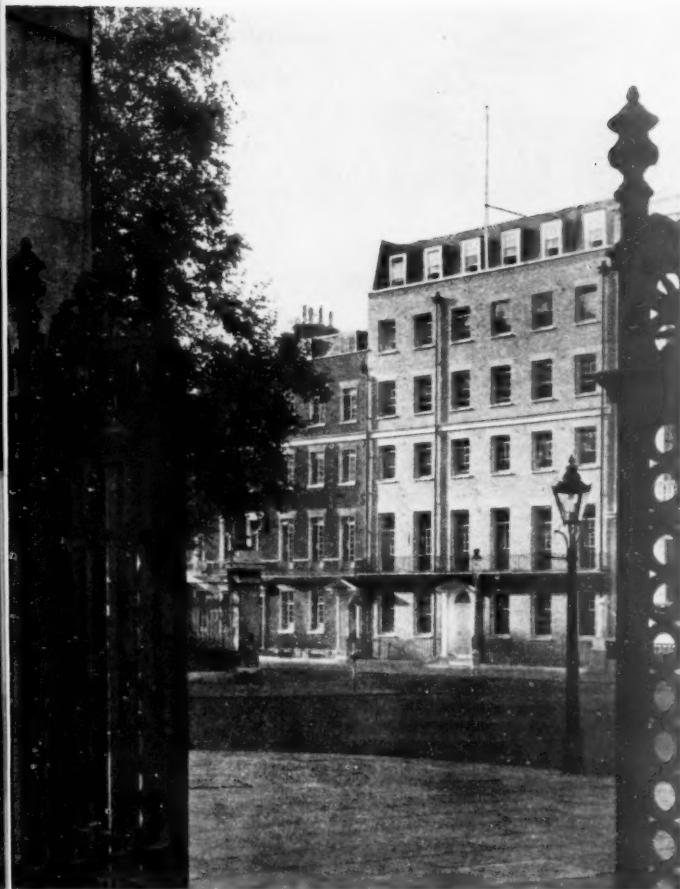
architects:
SYDNEY CLOUGH
SON & PARTNERS

13 Buckingham Gate

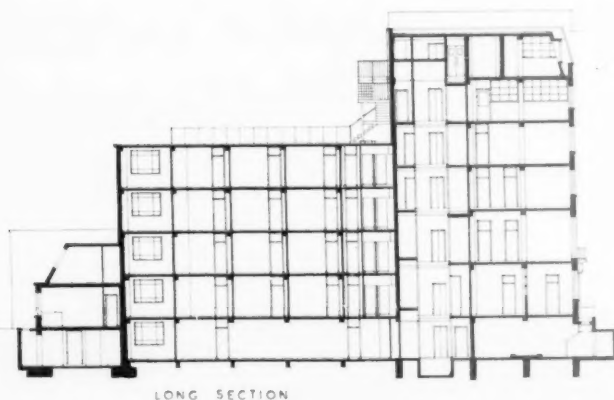
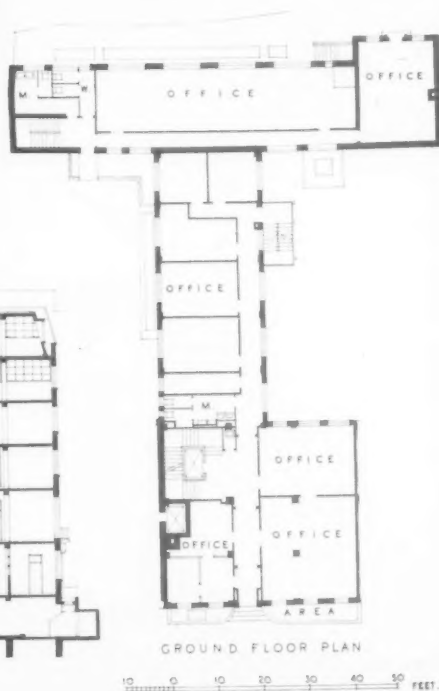
THIS building was partly demolished and has been reconstructed with the old materials in order to reproduce, as far as possible, the original building. The door surround and front doorway is completely new and was designed by the Architects.

12 Buckingham Gate

New offices for the Director of Public Prosecutions. This is an entirely new R.C. framed building occupying the sites of Nos. 11 and 12 Buckingham Gate. The front elevation is constructed in hand-made facing bricks, the horizontal motive of the existing buildings being carried through as far as possible, although an extra storey has been added to the buildings with a view to obtaining additional accommodation and to achieve a



The front elevation of the new office for the Director of Public Prosecutions, although designed by the architects, was controlled by the Royal Fine Art Commission as the buildings are within half a mile of Buckingham Palace. No. 13 Buckingham Gate is on the left in the photograph.





Office of the Director of Public Prosecutions.
The lift with glass brick surround.

better joint between the Duchy of Cornwall's premises and the new buildings.

This scheme is one of the smaller Lessor schemes,



Detail of the doorway of No. 13 Buckingham Gate.



Detail of the doorway of the new office of the Director of Public Prosecutions.

the clients in this case being Messrs. Town Investments Ltd., of North Audley Street, W.1; the building being leased to the Ministry of Works for occupation by the Director of Public Prosecutions.

22, 24, & 26 Stafford Place

This building comprises part of the new building mentioned above in order to comply with the L.C.C. requirements for Means of Escape, etc. However, the majority of the buildings are reconstructed for use as offices by Messrs. John Howard & Co. Ltd., who are also the owners and occupants of Nos. 13 Buckingham Gate.

GENERAL CONTRACTORS: JOHN HOWARD & CO. LTD.

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Blinds: Deans Blinds (Putney) Ltd.
Bricks and Roof Tiling: Roberts Adlard & Co.
Central Heating: Norris Warming Co. Ltd.
Decorative Floors to 22-26 Stafford Place: Korkoid Decorative Floors.
Door and Window Fittings: Parker Winder & Achurch Ltd.
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Heating, Plumbing and Hot Water Services: Matthew Hall & Co. Ltd.
Ironmongery: Parker Winder & Achurch Ltd.
Joinery: The Adamite Co. Ltd. Alfred Lockhart Ltd.
Lifts: The Express Lift Co. Ltd.
Paint: International Paints Ltd.
Piling: The Franki Compressed Pile Co. Ltd.
Plastering: H. H. Martyn & Co. Ltd.—door surround in fibrous plaster, W. A. Telling Ltd.
Reinforced Concrete: The British Steel Reinforcement Co. Ltd.
Roof—Flat: McCartney Ltd.
Railings: William Pickford Ltd.
Sanitary Fittings: B. Finch & Co. Ltd.
Stonework—Cast: The Enfield Stone Co. Ltd.
Ventilators: Colt Ventilation Ltd.
Waterproofing: R.I.W. Protective Products Ltd.
Windows—Metal: The Brunswick Metal Casement & Engineering Co. Ltd.
Wrought Ironwork: William Pickford Ltd.

POINTS FROM PAPERS



THE UNITED NATIONS BUILDING IN NEW YORK

Extracts from the paper given at the R.I.B.A. on February 20 by WALLACE K. HARRISON, Director of Planning, U.N. Headquarters, New York

ANDRE GIDE has said: "Having arrived at a certain point in history, there is nothing which does not present a problem . . . There is architecture to-day. Architecture not only presents but is the sum of the problems of the day. One of the greatest I've ever had to face, with fourteen other composer architects, was that of trying to build, quickly and well, a headquarters for the United Nations.

In April, 1947, the Secretary-General of the United Nations, Trygve Lie, a truly great man, assembled in New York a group of architects and engineers (speaking at least ten languages and from 14 different countries) to design, as a group, a home for the United Nations. We disagreed, we fought, but we worked hard and each day we returned ready to start anew. We knew we had to succeed.

The 14 architects appointed by the various member nations were: John Antoniadis, Greece; Nicolai Bassov, U.S.S.R.; Vladimir Bodiansky, France; Gaston Brunfaut, Belgium; Josef Havlicek, Czechoslovakia; Charles Le Corbusier, France; Ernst Cormier, Canada; Ssu-ch'eng Liang, China; Sven Markelius, Sweden; Oscar Niemeyer, Brazil; Matthew Nowicki, Poland; Howard Robertson, United Kingdom; G. A. Soilleux, Australia; Julio Vilamajo, Uruguay; Ernest Weismann, Yugoslavia.

Julio Vilamajo, Uruguay's distinguished architect, was a sick man when he came to help us. Unfortunately, he has not lived to see the completion of his effort as he died the following April.

The youngest of all, Matthew Nowicki the brilliant Polish designer, was killed tragically in a plane crash in Egypt when returning from India.

Nicolai Bassov, Russian specialist in construction and foundations, was responsible for rebuilding plants destroyed by Germany during the siege of Stalingrad. He is an engineer of architectural breadth. He worked all one night to bring proof that a man would walk less if the elevators were put in the centre of the building.

Sven Markelius approached the U.N. from the point of view of its relationship to the city, and spent much of his time on approaches, the gardens, parking, etc. He also laid out a plan for the long range relationship of the U.N. site to the City of New York.

Oscar Niemeyer, one of the great designers of this world, held to the theory of open spaces and spaces around buildings. I believe his ideal is almost

the Greek one, that each building should be complete and perfect in itself; and simple forms should all have space around them.

Liang would constantly vote against placing the Secretariat Building with its axis running north and south. He wouldn't say anything, just vote against it. Finally, hoping for unanimity, if we could get it, I asked why. He answered, very quietly: "We have run our buildings from east to west in China for three thousand years and it's very satisfactory. I see no reason to change."

Howard Robertson, a modernist, constantly tried to get us to introduce courtyards, and when I walk across the wide open spaces in front of the Secretariat in winter, I know he was right. I may say that without the tact, courage and diplomacy of Howard Robertson, there would be no U.N. Headquarters to-day.

There is no greater problem in this world than to face a sheet of blank white paper. What to do next?

Some architects are able, as though improvising, to search their souls and find the proper symbolic solution for the problem at hand. This may result in such great monuments as The Invalides or St. Paul's. Or an architect may have an idea, a conviction, a philosophy—call it what you will—that the structural system must dominate the composition. This may result in an Orly hangar or an Eiffel Tower. But in each case man becomes a little dot in the empty spaces of the composition, left to his own devices to find his place, just as he did in the days when he explored caves for a home. It is architecture by man—but not of man or even for man.

We took as our first problem this man who, in the vast growing scale of world enterprises still stays 6 ft. high with a seat not over 2 ft. 6 in. In the Secretariat building, for instance, we had 4,000 people to take care of. They had to work together for the various bodies—the Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, and in 20 conference rooms.

Knowing that a man will seldom be over 6 ft. tall, we had to allow at least 2 ft. of space over his head for safety and comfort. As you know, the thickness of a floor in a modern office building, with air-conditioning, lighting, plumbing, and wind-bracing, is another 2 ft. 6 in. to 3 ft. 6 in. in height. So we have a floor height of between 10 ft. 6 in. and 12 ft. 6 in. from floor to floor. This floor height of 12 ft. comes from the height of a man working in an office.

We found we needed an area of 96 sq. ft. for desk, chair, files, etc. Study-

ing the depth to which a good light will penetrate a room from a window at one side of the room, we find that when the head of the window is 8 ft. from the floor daylight will efficiently enter about one and one-half times the height of the head of the window, or about 12 ft. into the office. That gives us an office 12 ft. deep. When we divide this into 96 sq. ft. of floor area, we have a minimum office 8 ft. by 12 ft.

Generally we find that the ideal office building plan is an outside office about 8 ft. by 12 ft. and inside that another 8 ft. by 12 ft. office for a secretary, reception space, or files. This gives a depth of 20 ft. to 24 ft. To this we must add a corridor of 6 ft. making in all about 30 ft. of outside space.

In a building with a population the size of the Secretariat, elevators have to be about 5 ft. by 10 ft., or 6 ft. by 8 ft. to let people in and out efficiently. And elevators have to work in groups of six or eight to keep the interval of waiting at any floor at a minimum. With elevators in banks of six or eight, and with a corridor between them, we find that the distance from centre of bank to centre of bank of elevators is from 24 ft. to 27 ft. This determines the location of our wind-bracing in office skyscrapers. Stairs, toilets, ducts are also standards related in size to the man. Also in plan we have found that if a man has to walk more than 125 ft. from his office door to an elevator, he is wasting time and energy. Finally, we have found by experience that with conditions similar to those found on Manhattan Island, a building 25 to 45 stories high is the most efficient and economical.

And, when you have solved all requirements and added a study of the problem of the economy of the perimeter, the architect has a rather complete plan—almost fixed—and largely determined by the size and energies of this little animal, the human being.

There is another major factor that enters into the designing of a skyscraper. Every skyscraper must be built in units not more than 15 storeys high, built one on top of the other. Thus at approximately every fifteenth floor you have a "basement" for water tanks, elevator and air-conditioning machinery, and fire protection. At this point we combine our facts of plan and section on paper and it is only then that adjustments are made for exterior design.

In the Secretariat buildings of the United Nations Headquarters, we have provided well for the little man. We have: a population of 4,400; office space of 446,136 sq. ft.; meeting rooms and others of 365,176 sq. ft.; total area of 811,312 sq. ft.; area per person of



Unatons photograph

The Secretariat Building, with Queensboro Bridge in the background.



Unations photograph

United Nations Headquarters from across the East River

135 sq. ft.; building cube of 10,950,000 cu. ft.

Now, how do we plan the great council rooms where these men work together? We find that the same system used in planning office space can meet the needs of the conference rooms. Each room is worked out exactly as the office is worked out: one man after the other. As the engineer replied when asked, "How can you build a railroad 3,000 miles long?" "It's easy—I only build 1 ft. at a time." We built one seat at a time.

I believe there are three essential parts of architecture: human, natural, and technological.

In the technological area we in the United States have developed many new materials, just as you have. One of our major problems has been that as buildings are built higher the wind, vacuum, rain, sleet, and snow bring up many new and more difficult problems. Every building is alive and moving. Sometimes the movement is considerable, as at the top of the Empire State Building. And there is no way with steel skeletons to completely stop this movement. If it is not caused by wind pressure, it is due to the differential between one side heated by the sun and the other exposed to a cold draught. This means that every joint, stone or brick is opening and closing all the time.

We have tried to find a solution to this problem by using metal, in one form or other, in place of heavy surface

masonry. We must remember that when we take the masonry off a building it becomes more flexible and therefore we have to design more carefully for deflection.

There are important developments coming in air conditioning and insulating. The use of light has also changed considerably. We have found that we have to eliminate contrasts and raise the foot-candles to two or three times the quantities used in pre-war days. The use of silicones in some ways will open great new areas of development—and, of course, glass is just starting to be used for its various properties. In the U.N. we use a green glass which blocks the infra-red rays. When the sun is shining we have shown that the temperature is 10 degrees Fahrenheit less on the interior than with ordinary glass.

The use of two sheets of glass will be developed rapidly with the new glass seal for double windows. Glass curtains and upholstery materials—glass for insulating—glass as an acoustical sound absorbing material are some of the new uses. In the U.N. Secretariat we used sound-absorbent material in the ceilings, and Mr. Lie objected because he said it made the office too quiet.

I believe in the inevitability of gradualness, but I like the shock of revolution. I'd like to see us really revolt against the idea that the machine will use man instead of man using the machine.

Where does all this lead us? Well, stated simply—the study of architecture is the study of man.

When we think of man we think of space around man, and the future of architecture depends on the way we manipulate that space.

We can not just draw plans.

We can not just draw elevations.

We can not just know techniques.

We can not just know mechanics.

We must know man.

We must know more about man than any of our predecessors—not less.

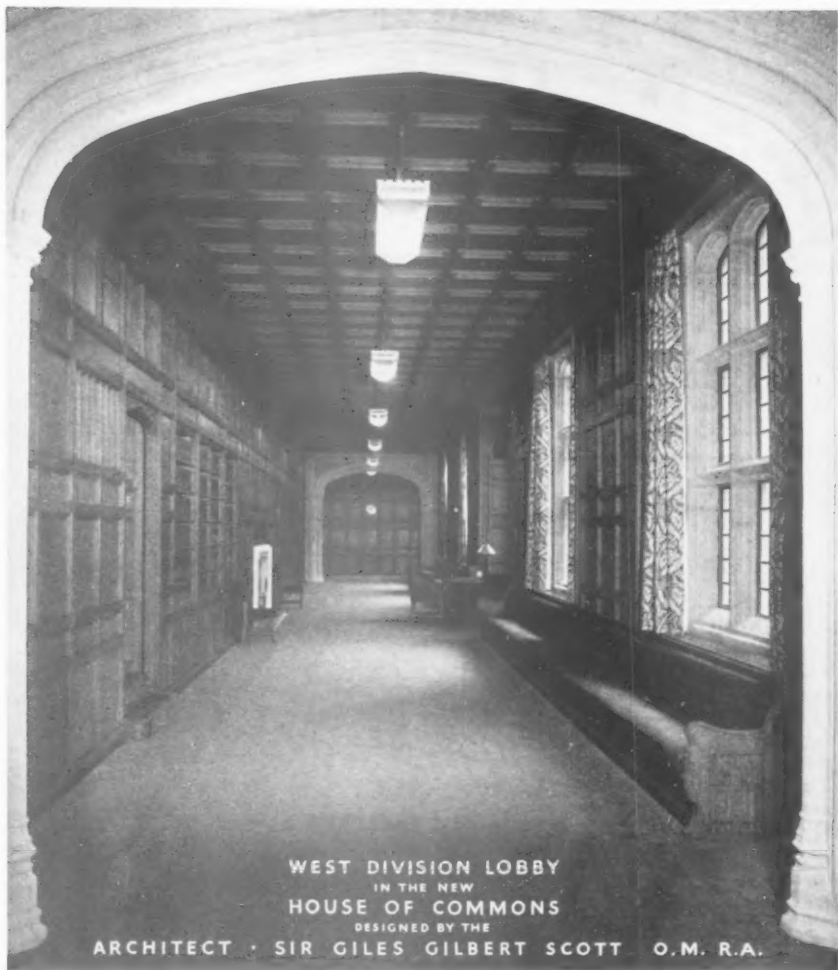
We must approach architecture simply, without fear, without price—with faith in the human being.

When we reach this point, we have struggled through the thick woods and brambles up the hill to find ourselves on a precipice looking out over the vast expanse of the unknown. It is at this point that the great ones will be able to reach into that stratosphere of understanding too high for most men and bring down to this earth a little of that common inspiration which God grants his artists. This is the way that architecture is achieved.

Everything is ahead of us: The best play has not been written. The best song has not been sung. The best building has not been built.

Our job in building the U.N. was a difficult one—possibly too difficult, but we have tried with all we had to build for man his Workshop of Peace.

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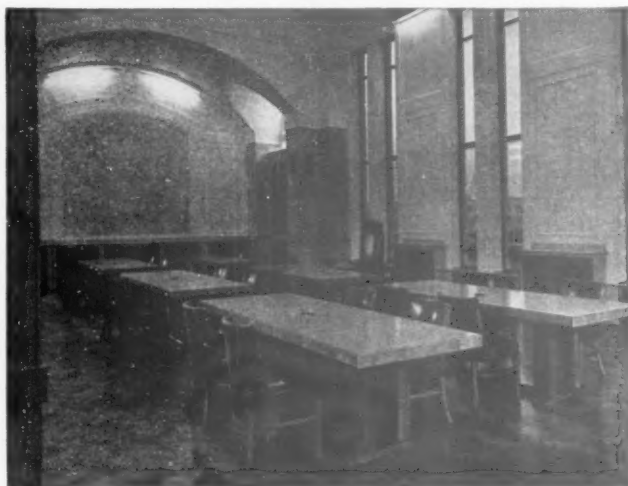
M-W.59

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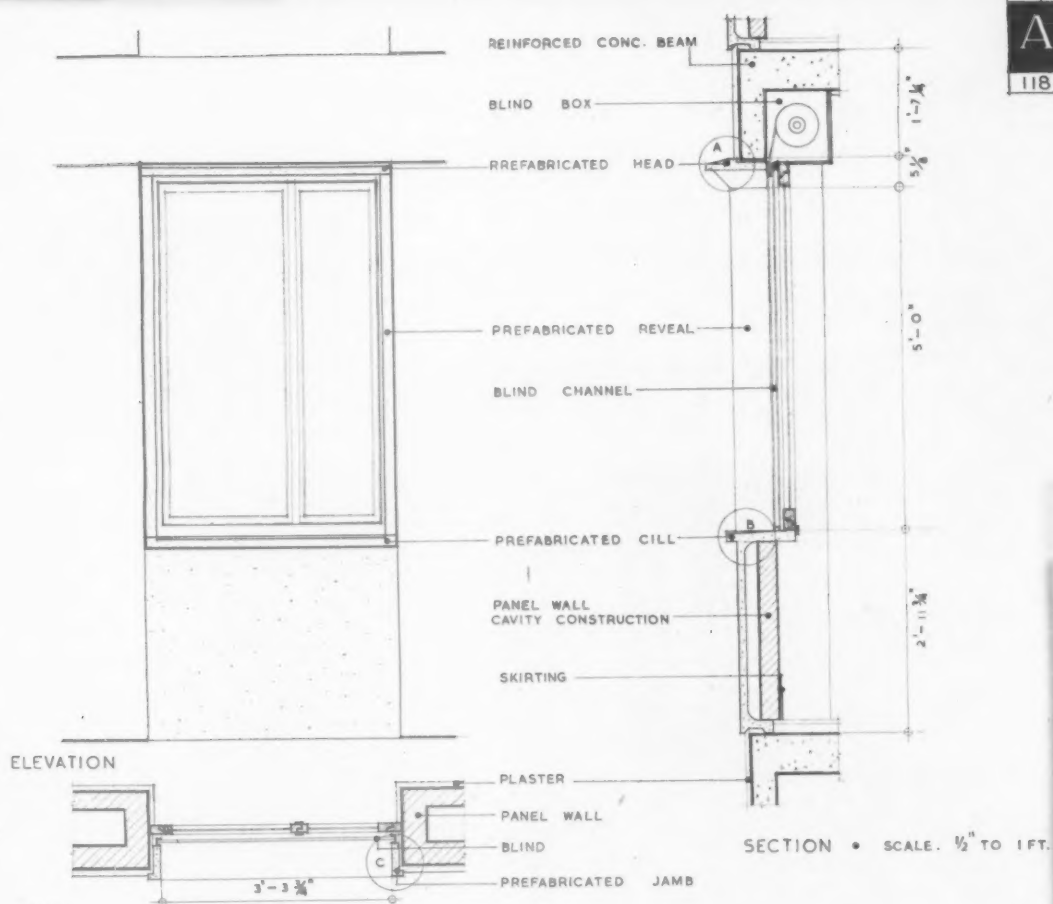
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1/8 F.S. SECTIONS & PLAN OF
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NEWS of the BUILDING INDUSTRY

INTEREST PROBLEMS OF THE BUILDING INDUSTRY

Mr. Dudley Cox's Inaugural Address



Stud Welding

STUD WELDING, used extensively for many years in shipbuilding, has been developed recently in America for use in the construction industry.

The extensive use of this system for building is relatively recent in this country and possibly not widely enough known. Demonstrations of the Nelson Stud Welding technique, which took place recently in London, illustrated clearly the time and cost saving propensities of this method.

The range of studs of varying shapes and sections which can be securely gunned into position on steelwork is wide. Of particular interest to the building trade, though by no means the only possible application, is the use of the stud welding technique for fixing roofing sheet or wall cladding. This technique which has been employed on the Industry Pavilion at the Festival of Britain obviates the use of internal scaffolding and ensures accurate fixing since the studs can be welded after the sheeting is in position on a roof.

OLD ETONIAN MR. D. E. WOODBINE PARISH, Senior Vice-President of the L.M.B.A., paid a visit to Eton College and addressed boys from the Senior School on Building as a Career. After showing them the Ministry of Works' film, "The Task Before The Industry," he invited the school to send a party of boys to visit a building contract in London during the summer as the guests of the L.M.B.A. The president of the L.M.B.A., Mr. Dudley F. Cox, is an old Merchant Taylors' boy.

THE ANNUAL PRIZE-GIVING FOR APPRENTICES in London who have been awarded prizes from the B.A.T.C. Welfare Fund for work, both practical and theoretical, at Technical Schools, was held in the L.M.B.A. headquarters on Friday, March 2. Fifty three apprentices received prizes.

The total number of prize-winners in London this year is 90, but some of the prizes have already been presented at ceremonies at Technical Schools.

YOUR BUSINESS—the monthly news sheet of the Birmingham Corporation—quotes an increase of 64% in 1950 over 1949 for houses built by the Corporation. Since much of this increase was due to using non-traditional methods the House Building Committee proposes to place contracts with four more firms specializing in non-traditional construction.

(continued on page 271)

In an inaugural address to the Council of the L.M.B.A. on February 15, Mr. Dudley F. Cox, the new President, outlined some of the problems to which he proposed to devote special attention during his year of office.

First and foremost, said Mr. Cox, is apprenticeship. I appreciate the difficulties which builders in London advance when they are approached on the question of apprenticeship. They have no certainty of continuous work: they have not got suitable work on which to train the boys; the future is extremely doubtful; anyhow, National Service will take away the boys as soon as they are trained. In other words, it is too much of a gamble for them to commit themselves to a several years' undertaking in respect of an apprentice.

But building was never a safe, sound, straightforward, assured existence. It is, and has always been, a gamble. We must accept our responsibilities in this matter. Apprenticeship is the insurance of this industry for the future; without trained craftsmen our industry will fail.

LOCAL APPROACH

It is our intention this year to ask Areas to accept further direct responsibilities on apprenticeship. Apprenticeship is a question on which, in the past, there has been insufficient active interest. That must be remedied. As a first step, we are strengthening the Apprenticeship Committee, at the same time ensuring that every Area has a representative so that members will be fully informed of what is happening. I ask your closest and most energetic co-operation in this matter.

EDUCATION

Allied to apprenticeship is education. It is our intention to do everything possible to encourage the expansion of administrative and technical education at all levels, and so increase efficiency and with it productivity. We shall continue to strengthen the liaison between technical colleges and the industry to ensure that instruction and practice go hand in hand.

FOREMEN

Co-operation with other branches of our industry is a matter on which the L.M.B.A. has been very active in recent years.

Last year we sponsored a Regional Council, on which three of the main foremen's associations were represented. Our object was to have a comprehensive and representative body with which to deal. I have always felt that we have rather omitted to take full advantage of the comprehensive advice of this grand body of men, the men who mean so much on our contracts, the men who are the direct link between management and operatives, and who are, without question, so well qualified to advise us on matters which are the direct concern of both parties, like apprenticeship, incentives and working conditions.

It is desirable for foremen to ally themselves with one or other of the foremen's organizations, and I trust you will encourage them to do so. We have already submitted to them various questions on which we seek advice, and we await with interest the results of their considered opinions.

ALLIED TRADES

Like the foremen, and like the architects, the surveyors and the operatives, the allied trades are part and parcel of the building industry. They have been represented in the L.M.B.A. by their separate committees, but they have been somewhat self-contained units, relying on us more for support when necessary rather than taking active participation in our association affairs.

Last year we set up an allied trades committee, where matters of general interest between sub-contractors and general contractors should be discussed and elucidated. I hope our allied trade members will make full use of it.

In recent years our sub-contracting trades have tended to divorce themselves from the building trade. This, to my mind, is fundamentally wrong, and it is my desire that we should all get closer together. They should be interested in our problems, and we should be interested in theirs. We have a large number of tile-fixers, plasterers, stone-masons and shop-fitters among our members. They should be welcomed to our Area meetings and given every opportunity of joining in our discussions.

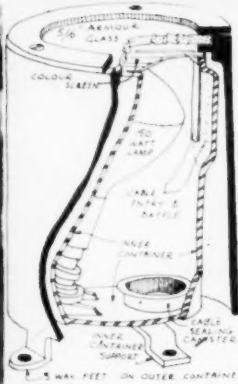
INCENTIVES

We shall support the policy of incentive payments in every way possible, and we propose to ask you to approve the setting-up of an incentive committee, in order to advise when necessary.

RESEARCH

Here we have come to the conclusion that what the average building contractor wants is advice of developments in building science and practice explained to him simply and briefly and arrangements whereby we can get, quickly and easily, advice on the technical problems which come up on his jobs.

With this in mind, we asked the Ministry of Works if they would make available to us a recognized portion of the services of their Regional Technical Adviser in London, and I am glad to be able to tell you that they have agreed. The arrangement will come into operation, I hope, not later than April 1. He will be available for consultation by individuals, either in person or by letter, and he will visit our Areas on request and lecture from time to time on developments. We feel that this will greatly increase an interest in technical development, and so will lead to advance in knowledge and therefore improvements in production.



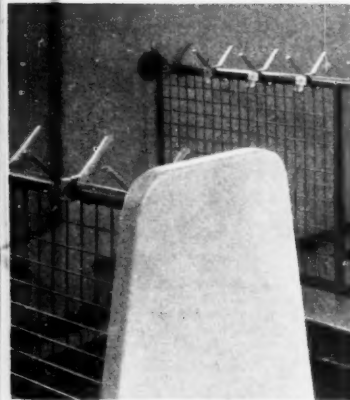
SERVICES, LIGHTING B1.9

This new under-water floodlight, which measures only 12 in. high by 8 in. diameter, is made on the diving bell principle. It consists of an external cylinder, closed at the top by a sheet of 1/2 in. armour plate glass, inside which is fitted a second cylinder, closed at the bottom. This inner cylinder forms the lamp chamber, and water is prevented from entering it by the pressure of the air trapped under the top cover when the unit is placed under water. The metal box housing the connector is sealed to prevent air from the inside of the unit escaping along the cable. A 150W. Spotlight Reflector lamp with internally silvered bulb is used in the floodlight, and is held at such an angle that the beam is about 15° from the vertical.



SERVICES, PLUMBING B4.4

A prototype of the low level cistern illustrated was exhibited at the 1950 B.I.F. The cistern shell and cover, now in production, are of black Duranite with anodised aluminium beading between cover and shell. To comply with B.S.S. 1125/45 the cisterns must have a ballvalve complying with B.S.S. 1212/45. A high level model is also made. Both types are available in 2, 2½ or 3 gallon sizes. The cisterns are fixed on concealed brackets. Unless otherwise specified both patterns are supplied with inlet and operating lever on the right hand side. The cisterns are packed one to a crate measuring 23 in. x 16 in. x 12 in. Net weights are 43 lb. for the low level type; 39 lb. for the high level.



FITTINGS, CLOAKROOMS C7.1

The picture shows cloakroom hooks of a new design. These hooks incorporate a secret fixing device which prevents them slipping or being pulled out of true. The number tabs which can be obtained in various colours have a flush screw fixing. The metal mesh screens, by the same firm, are extra strong and are welded at top and bottom to the tubular rails.



PLANT, CONCRETE MIXING E8.3

Reduction in weight is a feature of this recently improved folding weigher. Other improvements have been aimed at achieving greater accuracy in mixing scientifically designed mixes. The weight-beams, for instance, pivot on sealed roller bearings—knife-edges have been eliminated. Three point suspension obviates the necessity for completely levelling up the mixer. Bonded rubber joints insulate the weighing dial against vibration. This weigher can be fitted on the site.

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Associate Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

M.O.W. LECTURES

March 7

Mechanization of Small Jobs.
7.30 p.m. at The Municipal Hall, TAUNTON.
Essentials of Good Concreting.
7.0 p.m. at Small Hall, Digbeth Institute, BIRMINGHAM.
Essentials of Good Concreting.
7.30 p.m. at Twickenham Technical College, Egerton Road, TWICKENHAM.

March 8

Prestressed Concrete Developments.
7.0 p.m. at Technical College, The Butts, COVENTRY.
Timber in Building: Factors Affecting Its Behaviour and Durability.
7.15 p.m. at Y.M.C.A. Hall, High Street, PAISLEY.

March 13

Mining Subsidence.
7.0 p.m. at Y.M.C.A. Little Theatre, Fawcett Street, SUNDERLAND.
Application of Zinc in Building.
7.0 p.m. at Technical College, Manor Croft, BURTON-ON-TRENT.

March 14

Good Practice in Domestic Drainage.
7.30 p.m. at Du-Jon Restaurant, Market Place, PETERBOROUGH.
Introduction to Site Costing for Builders.
7.0 p.m. at Heriot-Watt College, EDINBURGH.

March 15

Good Practice in Plumbing.
7.15 p.m. at Walker Hall, Technical College, Abbey Foregate, SHREWSBURY.
Good Practice in Domestic Drainage.
7.15 p.m. at Gas Showrooms, Osborne Street, GRIMSBY.
Structural Use of Steel in Building.
7.15 p.m. at The Lecture Hall, College of Technology, Warren Street, SHEFFIELD, 4.

March 19

Standard Method of Measurement.
7.15 p.m. at Electricity Showrooms, The Hayes, CARDIFF.

March 20

Standard Method of Measurement.
7.15 p.m. at The Guildhall, Civic Centre, SWANSEA.
Mechanization of Small Jobs.
7.0 p.m. at Technical College, WORKINGTON.

GOOD, BAD OR INDIFFERENT?

No. 25—By A. FOREMAN

Standard metal windows.

THERE seems to be a belief that fixing standard metal windows is a job for anybody, but in fact it needs a good deal of care if the result is to be satisfactory. Undoubtedly it is best to ask the supplier to fix them but this is sometimes not very convenient nor is he usually willing to keep sending to handle a few windows at any one time in a large scheme. This may be overcome, however, if wood surrounds or metal sub-frames are used.

Firstly, a few points about the windows themselves. Most reputable firms supply their domestic types in accordance with B.S. 990 which not only establishes shapes and sizes but also the essential requirements of quality. The range of sizes and types should be adequate to meet the needs of all but extraordinary designs, in spite of the comments to the contrary which one hears from time to time. It would, perhaps, be nice if the basic unit of width could be increased a little to say 2 ft., but I fear this might necessitate a heavier and more costly section for the metal. I am sometimes surprised that more thought is not given to the selection of types or combinations of units for two reasons; firstly to insure that some part of the windows in a room may be opened, regardless of the weather and the direction of the wind and, secondly, to ease window cleaning. Casement windows without vent-lights cannot be opened in wet weather if the wind is from any direction of the 180° radius of the elevation in which a window is placed and therefore some top hung units are essential in every room. I realize that transoms can be a nuisance to vision but this trouble may be reduced to a minimum if units of suitable size are selected and placed at such heights that the transome is at above 5 ft. 9 in. from the floor. Few people seem to realize the advantages of sub-light types of windows; these are windows with the opening portions raised some way above the sill and the space so created filled with fixed glazing which allow the use of window boards without the risk of things being blown or knocked off and also give a lower glass line without undesirable large opening lights.

I am amazed that there are still architects and builders willing to buy windows which are not rust-proofed but there are and it is dreadful to think how quickly trouble will start and once started it is almost incurable. I feel that it is of the very greatest importance that every steel window is protected against rust and in my opinion hot-dip galvanizing is the most serviceable protective coating.

Aluminium alloy windows, and some parts of nominally steel windows are also made of aluminium alloy, need care in handling as they are more easily damaged but they do not need rust proofing. They are sometimes covered with a protective coating of transparent lacquer but in time this seems to strip off although it does not matter. If aluminium alloy is to be in contact with mortar or plaster the surfaces in contact should be protected; bituminous paint is usually used although this is messy and a little awkward to apply.

Windows are probably best fixed after the structural openings are complete as this overcomes much of the risk of damage

and distortion of the frames. It is quite easy to make provision for fixing after the main structure is complete. It is true that it is more troublesome and more costly but it avoids damage to the windows which is the most important factor. The fixing lugs are easily adjusted to fit courses. The easy provision to make is to bed a brick in sand at each lug position so that it can be taken out and built-in with the windows later. There must be good clearance, at least $\frac{1}{4}$ in. all round the window unit, between the structure and the frame. In no circumstances must the frame carry any load whatsoever from the structure above the opening or during the formation of arches or lintels. Be sure that the windows are straight and plumb or the sashes will not fit closely to the frames; this is particularly important when built-up types are used with transoms and mullions. The best way to fix windows is undoubtedly to set them in wood or metal frames which are pre-formed to the right sizes to provide proper clearances. These sub-frames can be built-in properly and tightly as the walls rise and the windows may be put in when the scaffold is coming down. I have seen innumerable windows wrecked through scaffolding, and scaffold boards in particular, being rested on steel windows. There are two B.S., namely B.S. 1285 for wood surrounds and

B.S. 1422 for metal frames, which if followed will ensure proper dimensions to simplify fixing, apart from the fact that they improve the aesthetic appearance, and make a better and more water-tight job.

The infilling between metal frames and brickwork should be made with 1:3 cement mortar and the outside joint pointed with the special mastic, usually to be obtained from the window makers; proper pointing is of the utmost importance if damp penetration is to be avoided. Windows fixed into wood or metal frames should be bedded in mastic before being screwed into position.

Don't forget to use proper metal window glazing putty; the ordinary glazing putty is no good for the purpose as it does not harden properly. Also do not forget to give proper back puttying to the glass and do not cut the glass too tight, panes should be about $\frac{1}{4}$ in. narrower and shorter than the opening to be glazed.

Much harm comes to metal windows while standing about on jobs before they are fixed. Stack them upright on boards which are level, keep them clean and keep all opening parts closed. Carry them carefully to their fixing positions and do not haul them up a scaffold by a rope on one corner. Above all, be careful that the protective coating is not damaged.

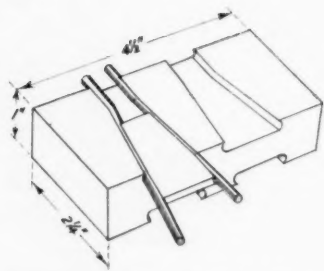
PRESTRESSED CONCRETE: RETROSPECT AND PROSPECT

No. 5 — By Rolt Hammond, A.C.G.I., A.M.I.C.E.

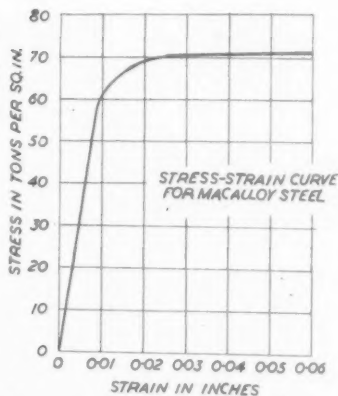
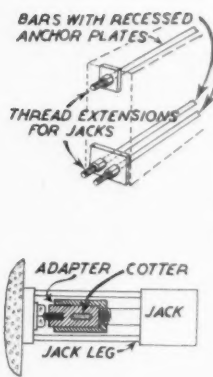
A recent important development in prestressed concrete is the Lee-McCall system. This relatively new system depends for its success upon the use of bars of high tensile alloy steel, (not previously available for structural work) combined with new types of end anchorages and a simplified method of applying the prestressing through jacks. These special steel bars are now available in diameters up to a maximum of $1\frac{1}{2}$ inches with threaded ends and anchorages, the steel having an ultimate tensile strength of from 64 to 72 tons per sq. in. Recommended initial prestress is 42 tons per sq. in., elongation on two inches being between 14 and 18 per cent. and on 8 inches between 8 and 9 per cent. The steel must not be welded or subjected to any heat treatment after delivery on site; it is supplied cut to predetermined lengths and threaded ready for use in diameters ranging from $\frac{1}{4}$ inch up to $1\frac{1}{2}$ inches including the threaded portion, being obtainable in lengths up to a maximum of 70 feet. For convenience in transport, lengths greater than 40 feet may be coupled together by connectors which have been designed to develop the full strength of the bar so that in fact any desired length of bar can be obtained. Special nuts, washers and other suitable fittings have been designed for the end anchorages.

An essential feature contributing towards the success of this system is the application of symmetrical loading to the prestressed member in order to avoid lateral curvature; for this reason two hydraulic jacks are generally employed, and a definite procedure must be followed in order to ensure that no tension is allowed to develop in the concrete during the prestressing. It is also necessary to emphasize that concrete quality is just as vital to success as steel of high ultimate tensile strength. Such concrete must be made of perfectly graded constituents, with minimum water content, and compacted by vibration to give maximum density. Steam curing or other methods of accelerating hardening should be employed for factory-made units, so that the moulds can be rapidly re-used. Tables are now available of properties of typical beams of I and U section, based on initial concrete stresses of 2,000 and 2,500 lbs. per sq. in. The former are based on a 6-inch cube compressive strength of 5,000 lbs. per sq. in. at 28 days with an average of the order of 6,000 lbs. per sq. in. This is the lowest quality of concrete recommended for this type of work.

A very important feature of this system is that since positive anchorage is provided for the bars, grout is not essential for normal performance on units prestressed



The drawings above and right (top left detail) show alternative methods of restraining the reinforcement at beam ends.



LEE McALL SYSTEM

by this method, but it is recommended in all cases where bars are located in holes preformed in the unit. Here the grout provides protection against corrosion and also against unusual stresses caused by accidental overloading. The system is applicable to almost any type of prestressed concrete structure. Its advantages are claimed to be greatest for those where durability is of the utmost importance.

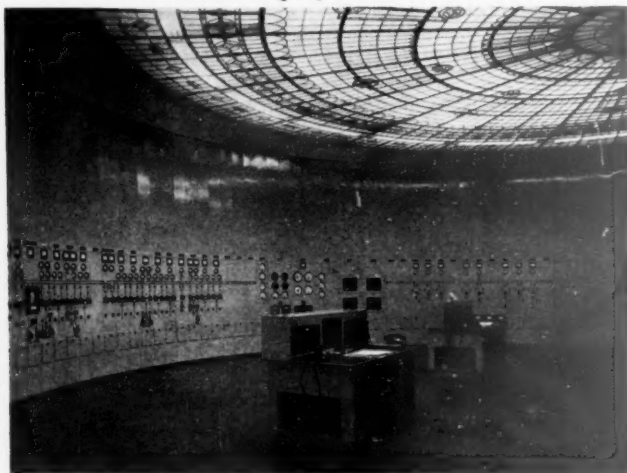
The application of cements with controlled expansion has an important bearing on the future development of prestressed concrete. An example of what can be done in this respect has been provided by work carried out on the repair of the Poix viaduct, which carries the double track railway from Rouen to Amiens. This is a

masonry structure with twelve circular vaults supported on high walls, distant 60 feet from axis to axis, the vaults having a thickness of 3 feet at the key. In 1940 the viaduct, four vaults and two piers of which had been destroyed in the course of military operations, had been partially rebuilt by Edmond Coignet, a French concern; in 1944, during an Allied air raid, a bomb passed through the fifth vault near the key and to one side of the centre line.

Single line working was adopted, and centering was erected under the damaged span. Broken masonry was then removed

and each arch ring was provided with a free space at mid-span, which was filled with concrete made with expanding cement, whereby the arch ring was precompressed against the abutments on each side. This provided an initial expansive force which compensated for shrinkage and creep of the rings, at the same time equalizing distribution of permanent thrust over the entire width of the arch. Parts of the arch rings other than the voussoir were made in ordinary cement concrete, with light reinforcement of the intrados which preserved the former external appearance.

LIGHTING ENGINEERS' PROBLEM



The difficulties which can be created by designing a building without consideration for the type of lighting to be installed are illustrated by this picture of the control room in the North Hyde substation of the Southern Electricity Board.

When the laylight, with its leaded design contrasting strangely with the clean design of the walls, had been installed B.T.H. Engineers were invited to supply a lighting scheme. The problem has, however, been successfully solved by the installation of thirty-four fluorescent lamps, housed in angle reflectors above the laylight. One semi-circular strip of glass was removed and replaced with specially constructed louvre boxes to provide direct controlled lighting on the face of the meter and switch panels.

OFFICE BOOKSHELF

The following technical and trade publications have been received and will be reviewed in a future issue.

PRESTRESSED CONCRETE by Gustav Magnel (second edition) London Concrete Publications Ltd., 14, Dartmouth Street, Westminster, S.W.1. Price 15s.

The chapter on continuous beams has been rewritten and includes complete calculations for a bridge. The section on the design of end blocks gives a new and simpler method of design. The chapter on the creep of steel has been completed by the results of tests on fatigue in steel wires, and the chapter on the applications of prestressed concrete has been enlarged.

DOMESTIC WATER HEATING by Ronald Grierson. Iliffe & Sons Ltd., London. Price 25s.

PRINCIPLES OF SURVEYING by James Clendinning, Blackie & Son Ltd., 66, Chandos Place, London. Price 20s.

AN ABC OF PUBLIC HEALTH LAW by J. F. Garner, LL.M., The Sanitary Publishing Co. Ltd., 8, Breems Buildings, Chancery Lane, E.C. Price 15s.

COLONIAL TIMBERS by C. W. Bond. Sir Isaac Pitman & Sons, Ltd. Price 30s.

THE DIRECTORY OF QUARRIES, CLAYWORKS & SAND & GRAVEL PITS, Etc. (12th Edition) The Quarry Managers' Journal Ltd., Salisbury Square House, Fleet Street, E.C.4.



Messrs. Patons & Baldwins, Darlington

Consulting Engineers: Sir Alexander Gibb & Partners

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508E C20

INTEREST (continued from page 267)

COPPER, ZINC and their alloys are now prohibited for use in certain manufactured goods under Statutory Instruments 275 and 277 which came into force yesterday March 1.

The Orders provide that these metals may not be incorporated in a list of scheduled articles and may be obtained from H.M.S.O. or through any bookseller.

A number of amendments have been made since the provisional list was published by the Ministry of Supply on December 28, 1950, wherever possible in consultation with bodies representing the industries concerned.

Some definitions have been revised to include small mechanical parts—such as rollers for curtain rails—and in a number of cases the wording of the definitions has been brought into line with trade practice.

Manufacturers may use until July 1, stocks of copper, zinc and their alloys in fabricated or partly processed state, which they have in hand on March 1.

The Order covers alloys containing copper and/or zinc to the extent of 40 per cent. or more by weight. The Order therefore prohibits the use of brass, mazac, gilding metal and nickel silver but not pewter.

The issue of licences will be considered for special purposes, such as rearmament, or where anti-corrosive metal is a necessity. Consideration will also be given to articles in which very small amounts of zinc and/or copper are needed for essential purposes, such as for gear wheels.

The schedule contains a large number of building products and fittings.

Applications for licences should be made in the first place to the Regional Office of the Department concerned.

"**PLASTICS IN ARCHITECTURE AND BUILDING**" is the title of one of the sessions to be included in the 1951 British Plastics Convention, which will be held concurrently with the British Plastics Exhibition at the National Hall, Olympia from June 6–16, 1951. A special feature will be "Plastics—the design and use", designed and constructed by the Council of Industrial Design.

A BUILDING TRADES' EXHIBITION will be held in Hanover from July 3 to August 12, 1951 under the patronage of Mr. Theodor Heuss, President of the German Federal Republic.

The exhibition comprises the following sections: A. National and Regional Planning; B. Town Planning, Workers' Cities and low-cost dwellings; C. Housing; D. Building and Site Technique; E. The Building Trade in the domain of the Artisan, of the Industry and Trade in materials; F. Foreign Sections; G. Special Sections.

"**BUILDING TOPICS**", the house organ of Tretol Ltd., contains an article on the construction of air raid shelters designed to give protection against the atomic bomb. The various problems are discussed and modifications of existing shelters suggested.

"**THE BASIC JOB** of the Building Industry is to do whatever the country requires of it. We builders wholeheartedly pledge our aid to the country in the difficult time ahead. We do not yet know what our precise part in the Defence Programme is to be but the sooner we are told, the sooner can we get moving and make the necessary redeployment of our resources and labour force.

"Whatever we are called upon to do it is



SKYLON

The struts which will brace the cables supporting the vertical feature in mid-air, at the Festival of Britain, arrive at the site. The erection of "SKYLON" is now well advanced.

essential that the country realizes that it cannot count on the highest efficiency from the industry unless adequate steps are taken to ensure that ample supplies of building materials are readily available on the site". Mr. Stephen Hudson, President of the N.F.B.T.E.

WINGET LTD. are planning extensions of production facilities in their Coatbridge works at a cost of £12,000.

This plant will expand the output of hydraulically operated mixers, screening plant and precast concrete machinery mainly for the South American, West and East African and Indian markets.

AN ADDENDUM to the M.O.W. Economy Memorandum, "Use of Cement in Engineering and Large Scale Building" published in April, 1949 has been issued.

The Addendum gives guidance on the precautions necessary to obtain quality control of concrete: choice of materials, design of mix, batching, water content, works cubes, and general supervision.

Copies can be obtained free of charge from: Ministry of Works (Room 617) Lambeth Bridge House, London, S.E.1.

PUBLIC SCHOOL interest in the Building Industry as a career will it is hoped be stimulated by the decision of the London Master Builders Association to become a subscribing member of the Public Schools Appointment Bureau at an annual subscription of £25.

The L.M.B.A. will help the Bureau—recently reorganized under the Directorship of Mr. Hugh Lyon former headmaster of Rugby—by giving full details of means of entry to the industry and of firms who operate suitable training schemes.

THE COAL UTILIZATION JOINT COUNCIL have recently resolved upon a policy of expansion of their work of encouraging the intelligent use of solid fuel in the wide range of modern appliances now available.

This expansion involves setting up regional organizations in eleven regional centres, the development of national and local publicity towards the better use of solid fuel in the home and the establishment in all the principal towns of the country of an approved panel of solid fuel appliance distributors from whom the public can secure the best possible technical advice and service.

LIFT OWNERS are advised by the Council of the National Association of Lift Makers that the only way of preventing

damage to lift equipment during periods of reduced voltage is to disconnect the lift from the electricity supply by opening the main switch or circuit-breaker. The lift should not be reconnected until the supply voltage rises above the Statutory minimum.

THE ELECTRICITY AUTHORITY in Pitlochry has offered to remit the £1,040 capital charge which would become due if the local authority were to approve exclusive electrical service to houses. Similar proposals have been made elsewhere in Scotland. The gas industry, feeling that such pressure is invidious in the present shortage of gas and electricity are to seek the advice of the Minister of Fuel and Power in stopping this monopolistic practice.

SIR HARRY SELLEY, speaking at the luncheon preceding the annual meet of the London branch of the Federation of Master Builders, drew attention to the New Streets Bill No. 19 which is now in the committee stage. Several aspects of this Bill affect builders and estate developers very closely and the Federation is taking steps to propose certain amendments. This bill, said Sir Harry, indicated more control of private building. The bill requires a cash deposit to be made to the authority. Sir Harry said that if he had had to do this in the past he would have put out more money to councils than he would have done on the whole job.

On incentives, the President said that what was needed was an incentive to save and suggested a system by which incentive payments might be loaned to the Government for 5 years free of charge.

On defence, Sir Harry said, "The needs of the defence programme are going to make a radical difference to the type of work the building industry will be undertaking over the next few years. Already the Chancellor of the Exchequer has indicated that much new building will be needed for defence purposes and that defence will be given priority, wherever necessary."

"No one, least of all the members of my industry, whose record during World War II was an inspiration to all, will grumble at this. But I must express the hope that the present Government will not take advantage of the National emergency to let loose a flood of new restrictions and orders which will have the effect of further hampering the master builder and his operative in the speedy carrying out of their work."

"I am convinced that an appeal to the patriotic spirit of the people in the industry will have far more effect than a series of orders-in-council."



CEMENT MANUFACTURE 1900—1951

One of several interesting reproductions in a brochure recently published by the Associated Portland Cement Manufacturers Limited, which celebrates its fiftieth anniversary this year. The picture shows an early testing laboratory.

A NEW FILM "Concrete", the third of the series in colour to be sponsored by John Laing and Son Ltd., had its preview at the Hammer Theatre, Wardour Street on Wednesday, February 14. Here is an uncolourful subject made colourful in an interesting film running about 30 minutes.

The subject matter shows how materials are carefully selected, graded and proportioned and the final product designed for its particular purpose with laboratory control exercised at every stage in the production. Precise and large scale weighing-batching methods are illustrated, and the performance of a mobile-twin batch paver which mixes the concrete and places it automatically are highlights in the film. The paver is followed by mechanical spreaders and finishers which complete the job. 1500 ft. of paving a day can be laid in this way.

The film is 16 mm. and was made by Industrial Colour Films Ltd., producer, John Mallison.

Copies will be loaned free of charge upon application to the Public Relations Department of John Laing & Son Ltd.

BUILDING (SAFETY, HEALTH AND WELFARE) REGULATIONS No. 87, 1948, which deals with the use of certain mechanically propelled vehicles and mechanically drawn trailer vehicles on a building site, includes a requirement that the vehicle shall not, when being moved at the site, be used to carry a load greater than load specified as a safe load in a certificate or other document which shall have been obtained from the makers or from a competent person and clearly marked on the vehicle.

It has been found that this requirement cannot be satisfactorily applied in practice and might lead to danger rather than safety because, in some circumstances, it would be dangerous to load a vehicle up to what would normally be a safe load. The Minister of Labour and National Service accordingly proposes to delete this requirement and to amend the wording of the present following requirement (that the vehicle shall not be so loaded as to interfere with the safe driving or operation of the

vehicle) to make it clear that this relates to the extent as well as to the manner of loading. He also proposes to take the opportunity of amending the phrase "owned, hired and operated under the control of or used by" which has been criticized as obscure.

Subject to these three amendments, it is proposed that the Regulation shall remain unaltered but, for convenience, be re-enacted as a whole in its amended form.

The Minister is accordingly publishing in the London and Edinburgh Gazettes notice that he proposes, under the Factories Act, 1937, to make Special Regulations to be entitled "The Building (Safety, Health and Welfare) (Amendment) Regulations", substituting an amended Regulation 87 in place of Regulation 87 of the Building (Safety, Health and Welfare) Regulations, 1948, and that copies of the draft Regulations, 1948, may be obtained from H.M. Stationery Office, York House, Kingsway, London, W.C.2, or their Edinburgh, Manchester and Cardiff offices or through any bookseller. Any objection must be sent to the Minister in writing on or before March 31, 1951 and must state:—

- (a) the specific grounds of objection; and
- (b) the omissions, additions or modifications asked for.

Objections may be addressed to the Secretary, Ministry of Labour and National Service, 8, St. James's Square, London, S.W.1.

AN INCREASE OF 1½d. per square yard in the maximum prices of Gypsum Plasterboard has been authorized by the Minister of Works and is now in force.

THE ALLOCATION OF IMPORTED VIRGIN COPPER during March and April will be the same as during February, i.e. 85% of the average monthly consumption during the first six months of 1950.

Consumers may now order copper for delivery in both March and April up to the tonnage of their quota in February. Orders placed in February for delivery in April will be subject to the usual premium.

On December 14, 1950 the Ministry announced that orders for delivery subsequent to the month of order could not

be accepted for more than two-thirds of the quota notified. This proviso is withdrawn for March and April.

Until further notice purchases of virgin lead from the Directorate of Non-Ferrous Metals will be restricted each month to a quantity not exceeding 90% of their average monthly consumption in 1950. This has been made effective from February 1 last. The Director of Non-Ferrous Metals will notify each consumer of the amount he may purchase.

TRADE FAIR EXHIBITS abroad will not require Bank of England approval before shipment from March 5 onwards—provided that a statement is included on the form and on the pre-entry documents giving details of the Fair in question, quantity and value of goods and an assurance that they are being shipped to secure export orders. Full particulars may be had from the Treasury.

BRITISH STANDARD FOR REFUSE CHUTES (B.S.1703:1951) has been prepared in order to indicate a general layout and suitable materials for refuse chutes incorporated in multi-storey buildings particularly for the purpose of handling domestic refuse.

The aim has been to give the general characteristics and principles of a type of refuse chute convenient to use and ensuring freedom from nuisance to the occupiers of a building. The requirements in regard to materials and dimensional proportions have those ends in view.

Requirements of the component parts of the chute, hoppers and container chamber are given, together with such dimensions as are essential to secure satisfactory performance of the installation.

Copies of this standard, just issued, may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1., price 2s. post free.

The British Standards Institution has also issued the fourth volume of the special series of British Standards for school equipment which have been prepared in the light of recommendations of the Schools Committee, set up jointly by the Ministries of Education and Works.

THE COUNCIL FOR CODES OF PRACTICE FOR BUILDINGS has now issued in final form Code 407.301, "Hand-power Lifts for Passengers, Goods and Service". The Code was previously published as a draft for comment and was revised before publication by a Committee convened by the Institution of Mechanical Engineers on behalf of the Council.

This Code deals with lifts that are operated by hand-power for passengers (such as invalids), goods and service; and generally installed where conditions do not justify the capital cost and running expense of a power-driven lift.

The Code contains some notes on the delivery and storage of materials, services of other trades, scaffolding and fencing, etc., and the protection of equipment after erection. It concludes with recommendations regarding inspection and maintenance of the completed lift. There are six illustrations showing typical layouts for the various types of lift described.

The Code carries the usual warning that, during the present abnormal conditions, it may not be possible to carry out all the recommendations.

Copies of the Code may be obtained from the British Standards Institution, 24/28, Victoria Street, London, S.W.1., price 3s., post free, reference CP 407.301.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

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BUILDING

BARMOUTH U.C. (a) Block of 4 maisonettes. Reconstruction and extension of car park. Erection of public shelter. (b) Council's Surveyor, Council Offices. (c) 2 Gns. each scheme. (e) Mar. 17.

BARROW-IN-FURNESS B.C. (a) Extensions to Risedale Secondary School. (b) Borough Engineer, Town Hall. (c) 2' Gns. (e) Mar. 19.

BATHAVON R.C. (a) 26 houses at Bath-easton. (b) H. H. Goldsmith, 18 Gay Street, Bath. (c) 2 Gns. (d) Mar. 5.

BEDFORD B.C. (a) 72 three-storey flats at Mile Road. (b) Borough Engineer, Newnham House, Horne Lane. (c) 3 Gns. (d) Mar. 6.

BINGLEY U.C. (a) Public convenience at Church Street, Cullingworth. (b) Council's Surveyor, Town Hall. (b) Mar. 10.

BOURNEMOUTH B.C. (a) 51 brick bungalows in five blocks on Toft Steps site. (b) Borough Architect, (Room 98), Town Hall, (c) 2 Gns. (d) Mar. 10.

BRIDLINGTON B.C. (a) 15 houses on West Hill Estate. (b) Borough Engineer, Town Hall. (c) 5 Gns. (e) Mar. 28.

CAMBRIDGE B.C. (a) 28 flats on Coleridge Road Estate. (b) Borough Engineer, The Guildhall. (c) 5 Gns. (d) Mar. 16.

CAMBRIDGE B.C. (a) 14 houses and 10 houses on Coleridge Road Estate. (b) Borough Engineer, The Guildhall. (c) 5 Gns. (d) Mar. 16.

CANVEY ISLAND U.C. (a) 12 houses at Long Road site. (b) Engineer and Surveyor, Council Offices. (c) 2 Gns. (e) Apr. 2.

CHERTSEY U.C. (a) 13 houses on Hare Hill Estate. (b) Engineer and Surveyor, Council Offices. (c) 1 Gn. (e) Mar. 12.

CHISLEHURST & SIDCUP U.C. (a) Public convenience at Westwood Lane, Blackfen. (b) Engineer and Surveyor, Council Offices, Main Road, Sidcup. (c) 2 Gns. (d) Mar. 8.

CORBY U.C. (a) 4 two-storey blocks of flats. (b) Council's Clerk, Council Offices. (c) 3 Gns. (e) Mar. 16.

COVENTRY C.C. (a) Day nursery on Monks Park Estate. (b) City Architect, 1a Warwick Row. (c) 2 Gns. (d) Mar. 10.

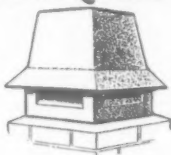
EASTBOURNE B.C. (a) School at Woodgate Road, to be known as Roselands Infants' School. (b) Borough Engineer, 2-4 Saffrons Road. (c) 2 Gns. (d) Mar. 5.

ESSEX C.C. (a) Alterations and extensions to Hainault Forest C. of E. School, Dagenham. (b) County Architect, County Hall, Chelmsford. (d) Mar. 3. Approx. cost £4,900.

FOLKESTONE B.C. (a) Block of 4 houses (Contract No. 2) on Bridge Street site, block of 4 aged persons' dwellings (Contract G) on Horn Street site, and 40 houses (Contract No. 6) on Biggins Wood site. (b) Borough Engineer, Municipal Offices, West Terrace. (c) 3 Gns. each contract. (d) Mar. 6.

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.

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HASTINGS B.C. (a) 16 flats in 4 blocks, 8 pairs of houses, on Rectory site, Hollington, and 2 blocks of 3 houses and 2 pairs of houses on Rock Lane site, Ore. (b) Borough Engineer, 37 Wellington Square. (c) 2 Gns. (e) Mar. 14.

ILKESTON B.C. (a) 86 dwellings on Section 2 of Kirk Hallam Estate. (b) Borough Surveyor, Town Hall. (c) 2 Gns. (e) Mar. 9.

KINGSTON-ON-THAMES B.C. (a) 80 houses on Chessington Hall Estate. (b) Town Clerk, Guildhall. (c) 2 Gns. (d) Mar. 19.

LIVERPOOL REGIONAL HOSPITAL BOARD. (a) Alterations to nurses' home at Cleaver Hospital, Heswall. (b) Regional Architect, Alder Hey Hospital, Liverpool, 12. (c) 2 Gns. (e) Mar. 14.

LIVERPOOL C.C. (a) 6 flats for police at Derwent Road, Stoneycroft. (b) City Architect, Blackburn Chambers, Dale Street, Kingsway. (c) 2 Gns. (e) Mar. 12.

MALVERN U.C. (a) Extensions to the Winter Gardens Concert Hall. (b) Water Engineer, The Council House. (c) 2 Gns. (e) Mar. 28.

MANCHESTER C.C. (a) Erection and completion of a "Medway" classroom unit at St. Robert's R.C. School, Longsight. (b) City Architect, Town Hall. (c) 1 Gn. (e) Mar. 9.

MANCHESTER C.C. (a) Public convenience at Hollyhedge Road, Wythenshawe. (b) City Architect, Town Hall. (c) 1 Gn. (e) Mar. 13.

MANCHESTER C.C. (a) Erection and completion of an additional classroom at Peacock Street Municipal School, Gorton. (b) City Architect, Town Hall. (c) 1 Gn. (e) Mar. 12.

MAIDENHEAD B.C. (a) 28 dwellings on Larchfield Estate. (b) Borough Engineer, 14 Craufurd Rise. (c) 2 Gns. (e) Mar. 9.

MANCHESTER REGIONAL HOSPITAL BOARD. (a) New twin operating theatres at Royal Albert Edward Infirmary, Wigan. (b) Board's Architect, Third Floor, Sunlight House, Quay Street. (c) 2 Gns. (d) Mar. 5. (e) Mar. 26.

MID-WALES POLICE AUTHORITY. (a) Police house at Trefechan Estate, Cefn Coed. (b) County Architect, Rhyd Offices, Brecon. (c) Mar. 16.

N. IRELAND-BALLYMENA R.C. (a) 12 houses, with site works, at Ballymarlow. (b) Messrs. Ogilby & McCutcheon, 5 Lombard Street, Belfast. (c) 5 Gns. (e) Mar. 17.

N. IRELAND-BALLYMENA R.C. (a) Canteen at Ballymena Academy for Board of Governors. (b) Messrs. McCarthy & Lilburn, Scottish Provident Buildings, Belfast. (c) 3 Gns. (e) Mar. 12.

NORTHALLERTON U.C. (a) 70 houses on Valley Road Estate. (b) Council's Clerk, 72 High Street North. (c) 2 Gns. (e) Mar. 10.

NOTTINGHAM C.C. (a) Changing rooms at Bulwell Hall Playing Fields. (b) City Engineer, The Guildhall. (c) £2. (e) Mar. 13.

NOTTINGHAM C.C. (a) Changing rooms at Strelley Road Playing Fields. (b) City Engineer, The Guildhall. (c) £2. (e) Mar. 13.

PEMBROKESHIRE E.C. (a) Grammar technical school at Pembroke Dock. (b) County Architect, County Offices, Haverfordwest. (c) 5 Gns. (d) Mar. 14. (e) April 12.

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NOTTINGHAM C.C. (a) 64 houses and 5 garages at Arnold Road, Bestwood, and 102 houses and 6 garages at Arnold Road, Bestwood. (b) City Housing Architect, The Guildhall. (c) 2 Gns. (d) Mar. 5. (e) Apr. 12.

ST. THOMAS R.C. (a) 20 houses at Topham. (b) Messrs. E. E. Ellis & Son, Station Parade, Exmouth. (c) Mar. 12.

SALTASH B.C. (a) Block of 4 shops with 4 flats above and 15 lock-up garages in three blocks, at Warraton site. (b) Borough Surveyor, Church House. (c) 2 Gns. (e) Mar. 26.

SALOP C.C. (a) Nurse's house at St. Martin's, Oswestry. Nurse's house at Hilton. (3) 3 firemen's houses at Ludlow. (4) 2 pairs of police houses at Wombridge, Oaken-gates. (5) a pair of police houses at Craven Arms. (b) County Architect, Column House, London Road, Shrewsbury. (c) Tenders for (1) and (2) by Mar. 10, and for (3), (4) and (5) by April 6.

SCOTLAND-HAWICK B.C. (a) Block of 6 houses at Gladstone Street. (b) Burgh Surveyor, Hawick. (c) Mar. 16. All or separate trades.

SCOTLAND-ST. ANDREWS B.C. (a) 36 houses. (b) J. C. Cunningham, 10 Alexandra Place, St. Andrews. Separate trades.

SEATON U.C. (a) 10 houses, and 10 houses, on Scalwell Lane Estate. (b) Council's Clerk, 4 Seafeld Road. (c) 2 Gns. (e) Mar. 12.

SEVENOAKS R.C. (a) 36 houses on Childs-bridge Lane site. (b) Engineer and Surveyor, "Inglewood," Oak Hill Road. (c) 2 Gns. (e) Mar. 29.

SOUTH SHIELDS B.C. (a) 124 dwellings on Section 2 (Contract A) of Simonside Development Area. (b) Borough Engineer, Town Hall. (c) 2 Gns. (e) Mar. 17.

TETTERHALL U.C. (a) 22 houses on Woodhouse Estate. (b) Engineer and Surveyor, Council Offices. (c) 3 Gns. (d) Mar. 3.

TIVERTON B.C. (a) 40 houses at Wilcombe Lane. (b) Messrs. H. S. W. Stone & Partners, 20 The Crescent, Taunton. (c) 2 Gns. (d) Mar. 3.

WALLASEY B.C. (a) Junior and infants' school at Mount Road. (b) Borough Architect, Town Hall. (c) 2 Gns. (e) Mar. 20.

WARWICK B.C. (a) Public conveniences at Castle Hill. (b) Borough Engineer, 20 The Butts. (c) 3 Gns. (e) Mar. 16.

WEMBLEY B.C. (a) Maintenance of housing and other properties during 1951. (b) Borough Engineer, Town Hall, write enclosing addressed brief envelope. (c) Mar. 14.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

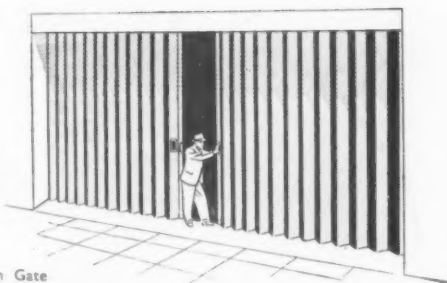
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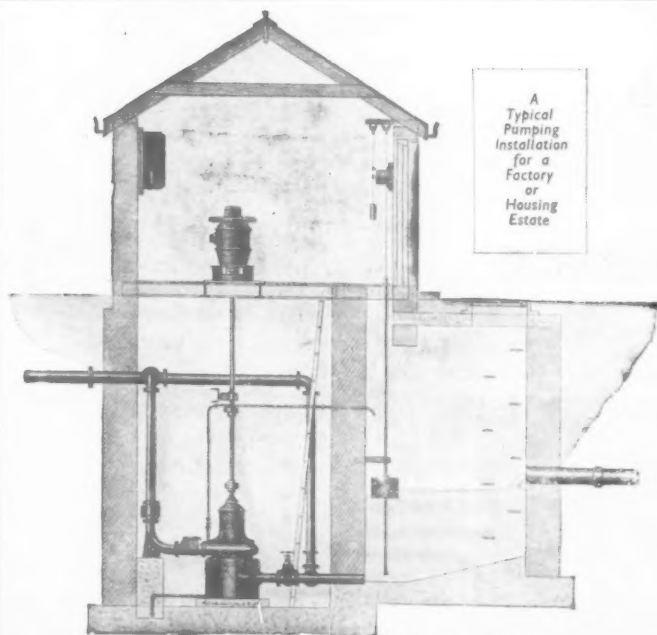
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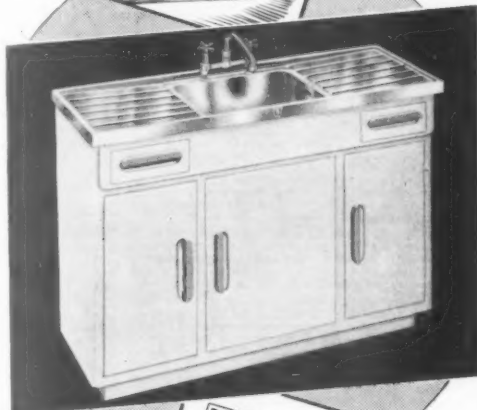
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APPOINTMENTS

LONDON COUNTY COUNCIL.

APPPLICATIONS are invited for positions of the **ARCHITECTURAL ASSISTANT** (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Act, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-story flats) and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualified. (918). [9101]

BOROUGH OF WILLESDEN.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

THE Council invite applications for the appointment of an **ARCHITECTURAL ASSISTANT** on the Permanent Staff of the Borough Engineer and Surveyor's Department.

The salary attaching to the post will be Administrative, Professional and Technical Grade VI of the National Whitley Council's Scale for the London Area, namely £595 per annum rising by two annual increments of £20 per annum and one of £25 per annum to £660 per annum, plus London Weighting of £50 per annum.

Candidates must be Associates of the Royal Institute of British Architects or hold an equivalent qualification and preferably have general knowledge and experience of architectural work in the service of a local authority.

The appointment will be terminable by one month's notice on either side, is subject to the provisions of the Local Government Superannuation Act, 1917, and the successful candidate will be required to pass a medical examination.

Applications giving age, experience, etc., accompanied by copies of not more than three testimonials should be addressed to the undersigned, endorsed "Architectural Assistant," not later than 10 a.m. on Monday, the 19th March, 1951.

It will be necessary for the successful candidate to provide his own housing accommodation, as the Council is not in a position to assist.

Canvassing, either directly or indirectly, will be deemed a disqualification.

(Signed) R. S. FORSTER, Town Clerk.

Town Hall,

Dyne Road, Kilburn, N.W.6.

24th February, 1951. [5286]

AIR MINISTRY have vacancies for **DESIGNER-DRAUGHTSMEN** in the Design Branch of the Works Department in the following fields: Architecture, Drainage and Water Supply, Land Survey. Vacancies are mainly in London but there are some in the provinces. If desired, consideration would be given to making appointments for London only. Salaries are on times up to £625 with starting pay in accordance with age and qualifications. Applications, stating age, qualifications, previous appointments (with dates), should be sent to Air Ministry (S.2.H), Cornwall House, London, S.E.1, from which address further details may also be obtained. [5278]

METROPOLITAN WATER BOARD.

APPOINTMENT OF ARCHITECTURAL ASSISTANT (UNESTABLISHED).

THE Metropolitan Water Board invite applications for the position of **ARCHITECTURAL ASSISTANT** (unestablished) in the Surveyor's Department, at a salary not exceeding £650 per annum. The commencing salary will be determined by the successful candidate's age and experience.

Candidates should be experienced in the preparation of working and detail drawings, specifications and quantities for houses and offices. The appointment will be terminable by one month's notice in writing on either side and will be held subject to the Board's conditions of service for the time being in force. Applications, stating candidate's age, present position, salary, and qualifications, with full particulars of experience, must be delivered to the undersigned, in envelopes endorsed "Architectural Assistant," not later than 14 days after publication of this notice.

Canvassing, directly or indirectly will be held to be a disqualification and candidates should state in their applications whether in the knowledge they are related to any member of, or the holder of any office under the Board.

W. S. CHEVALIER, Clerk of the Board.

Offices of the Board,
New River Head, Rosebery Avenue, E.C.1. [5286]

NIGERIAN COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY.

A VACANCY exists for a **LECTURER** in **ARCHITECTURE**, required in the early stages to design College buildings and assist in the supervision of building contractors. Teaching duties, developing as buildings are completed, will include instruction of Architectural Assistants, and of students in the Civil Engineering Department proceeding to A.M.I.C.E. examinations.

Candidates should have A.R.I.B.A. or comparable qualification. Experience as Design Architect, Resident Architect or Clerk of Works desirable. Teaching experience in a Technical College or University Department would be valuable.

Salary in scale £660-£1,300 per annum (including gratuity pay of £150-£300 per annum). Point of entry according to relevant experience. A temporary non-pensionable cost of living allowance of 10 per cent of basic salary is also payable. Appointment will be pensionable if confirmed after probationary period of 1 year. Alternatively contract appointment (non-pensionable but gratuity-carrying) at higher emoluments could be made. Quarters at low rental. Free first-class passages for person appointed and wife on first appointment and on leave. Either allowance of passage allowance for children under 16 up to two in number. Income tax at local rates much lower than those in the United Kingdom. Generous home leave on full pay.

Applications should be made by letter, stating age, whether married, full particulars of education, qualifications and experience and the names of three referees, to the Secretary, Advisory Committee on Colonial Colleges of Arts, Science and Technology, 15 Victoria Street, S.W.1, from whom further information may be obtained if required. Testimonials (not more than three) may be enclosed. Applications must be submitted by 15th March, 1951. [5269]

COUNTY BOROUGH OF CARLISLE.

CITY ENGINEER'S DEPARTMENT.

APPPLICATIONS are invited for the appointment of an **ASSISTANT QUANTITY SURVEYOR**, Grade A.P.T. VI (£595-£660).

Applicants for the appointment should be Corporate Members of the Royal Institution of Chartered Surveyors (Quantity Division) and should have experience in the preparation of Bills of Quantities, Estimates, measuring up and settlement of Final Accounts.

Housing accommodation will be provided for the successful applicant, if required.

Forms of application and conditions of employment may be obtained from the City Engineer, 18 Fisher Street, Carlisle, to whom all applications should be returned not later than Saturday, 17th March, 1951.

H. D. A. ROBERTSON, Town Clerk.

The Town Clerk's Office,

15 Fisher Street, Carlisle. [5271]

BOROUGH OF BEDDINGTON AND WALLINGTON.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

ARCHITECTURAL ASSISTANT.

APPPLICATIONS invited for above appointment. Preference will be given to persons holding appropriate qualifications. Salary A.P.T. IV (£480-£525) plus London Weighting.

If necessary, housing accommodation will be provided.

Forms of application obtainable from undersigned. Closing date Saturday, 17th March, 1951.

A. B. BATEMAN, Town Clerk.

Town Hall, Wallington, Surrey.

1st March, 1951. [5278]

IMPERIAL CHEMICAL INDUSTRIES LIMITED.

General Chemicals Division. Applications are invited for the following positions in the Architectural Section of the Chief Engineer's Department, Runcorn. Good salaries and prospects of promotion are offered to applicants with suitable qualifications and experience. Appointment carries membership of the Staff Pension Fund.

ASSISTANT ARCHITECTS—Ref. E/58.

Applicants should have had good general experience in design and the preparation of working drawings, and should preferably have passed the final examination of the R.I.B.A.

QUANTITY SURVEYOR—Ref. E/59.

Applicants should be experienced in the writing of specifications, the working up and preparation of bills of quantities for industrial type buildings, offices and amenity buildings, and be capable of preparing cost estimates, issuing inquiries and placing orders for specialist sub-contracts.

Applications, stating age, qualifications and experience, should be addressed to the Staff Manager, Imperial Chemical Industries Ltd., General Chemicals Division, Conard Building, Liverpool, 2. 20th February, 1951. [5270]

THE CIVIL SERVICE COMMISSIONERS give notice of a Supplementary Reconstruction Competition for pensionable appointments as **DRAUGHTSMEN**, (a) Architectural and Civil Engineering, and (b) Mechanical and Electrical Engineering.

Applications will be accepted at any time up to 1st March, 1951, and selected candidates will be interviewed as soon as possible after the receipt of their application forms.

Candidates must have been born on or after 2nd August, 1905, and on or before 1st August, 1926, with exception for regular service in H.M. Forces. They must have obtained by 1st March, 1951, the Ordinary National Certificate or equivalent qualification; but for most of Architectural Draughtsmen candidates without such qualification may be admitted exceptionally on evidence of training to an equivalent standard. Candidates must also have three years' practical experience including one year in a Drawing Office.

Opportunities for promotion.

Regulations and application forms from Civil Service Commission, Scientific Branch, Trinidad House, Old Burlington Street, London, W.1, quoting No. 3219. [5272]

HEBBURN URBAN DISTRICT COUNCIL.

APPOINTMENT OF ASSISTANT ARCHITECT, GRADE VI.

APPPLICATIONS are invited from suitably qualified persons for the permanent appointment of **ASSISTANT ARCHITECT** in the architectural section of the Engineer and Surveyor's Department.

The salary payable will be in accordance with Grade A.P.T. VI of the National Salary Scales, i.e., £595 to £660 p.a. The appointment will be subject to the National Scheme of Conditions of Service and the Local Government Superannuation Act, 1937.

The successful candidate will be required to pass a medical examination and to enter a Fidelity Bond in an amount to be fixed by the Council, the premium thereon being paid by the Council.

Preference will be given to Registered Architects who have had experience in the architectural design and construction of housing and general municipal work.

The Council will, if necessary, provide the successful applicant with housing accommodation on one of its estates.

Applications, endorsed "Assistant Architect," together with copies of two recent testimonials, must be received by the undersigned not later than Tuesday, the 13th March, 1951.

T. MEADOWS WRIGHT, Clerk of the Council.

Council Office,

Argyle Street, Hebburn, Co. Durham.

21st February, 1951. [5276]

COUNTY BOROUGH OF GREAT YARMOUTH.

EDUCATION COMMITTEE.

APPOINTMENT OF TWO CLERKS OF WORKS.

APPLICATIONS are invited for the appointment of two CLERKS OF WORKS to supervise the erection of the new Secondary Technical School and the erection of the "Beccles Road" Secondary Modern Girls' School.

The appointments will be temporary for approximately 2½ years in the case of the first and 2 years in the case of the second, and subject to one month's notice on either side.

The salary will be £12 0s. 0d. per week.

Applicants must have a thorough knowledge of the building trade, including experience in connection with steel framed buildings, they must be conversant with plans, specifications, bills of quantities, and competent to set out work, give levels and keep all necessary records and progress reports.

Applications, stating age, qualifications, present employment and previous experience, accompanied by copies of three testimonials, should be enclosed in an envelope, endorsed "Clerk of Works, Schools," and must be received by the not later than Monday, 26th March.

Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in writing whether, to their knowledge, they are related to any member, or holder of any senior office under the Council. Candidates who fail to do so will be disqualified, and if appointed will be liable to dismissal without notice.

D. G. FARRROW, Chief Education Officer.
22nd February, 1951. 15279

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £500) for work on new housing schools and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications.—Application forms from the Architect (AR/P/S), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (184) 10997

COUNTY BOROUGH OF ST. HELENS.

BOROUGH ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the following appointments on the permanent establishment in accordance with the National Conditions of Service and Salary Scales:

(a) SENIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. VII (£615-£710).

(b) SENIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. VI (£595-£660).

Applicants should be Registered Architects and preference will be given to holders of a recognised architectural qualification. Experience in the design of educational buildings will be an advantage for appointment (a).

Housing accommodation will be made available if required by the successful candidates.

The appointments will be terminable by one month's notice on either side and will be subject to the Local Government Superannuation Act, 1917. The successful candidates will be required to pass a medical examination.

Candidates must, when making application, disclose in writing whether to their knowledge they are related to any member of the Council or to a holder of any senior office under the Council.

Applications, stating age, qualifications, present and past appointments and details of experience, accompanied by copies of three recent testimonials, must be forwarded to the undersigned not later than Monday, 19th March, 1951.

Canvassing in any form will be deemed a disqualification.

M. WARD, M.I.M.E., A.M.T.P.I., Borough Engineer.
Town Hall, St. Helens.
26th February, 1951. 15281

STEVENAGE DEVELOPMENT CORPORATION.

APPLICATIONS are invited for the post of ASSISTANT CHIEF ARCHITECT (Grade II), at a salary of £1,000-£1,200 per annum in the Department of Architecture and Planning (Chief Architect and Planner, Clifford Holliday, March, F.R.I.B.A., M.T.P.I.).

The successful candidate will be responsible for the control of a large drawing office staff. It is essential that applicants should have ability in contemporary design and considerable experience of large-scale building works, contract management and be able to co-ordinate the work of groups of architects.

(a) The successful applicant will be required to contribute to a Local Government Superannuation Fund or an Assurance Scheme.

(b) The Corporation anticipates that, if so desired, it will be able in the near future to offer a successful married candidate the tenancy of a Corporation house.

(c) Canvassing, directly or indirectly, of members of the staff or of the Corporation will disqualify.

Applications should be made in writing by 12th March, 1951, to the Chief Administrative Officer, Stevenage Development Corporation, Aston House, Aston, Nr. Stevenage, Herts, stating age, professional qualifications, full details of experience and works carried out, appointments held, present salary and the names of three persons to whom reference may be made. 15282

ARCHITECTURAL APPOINTMENTS VACANT.

THE RAILWAY EXECUTIVE invite applications for posts of ASSISTANT ARCHITECT in London. Applicants should be A.R.I.B.A. or hold equivalent qualification and have had several years' experience in an Architect's office. Commencing salary £500-£550 per annum. Applicants selected may be required to join a Superannuation Fund in accordance with the rules of any such scheme.

Applications should give full particulars of qualifications, experience and age, and should be sent to Civil Engineer, The Railway Executive, London Midland Region, Euston Grove, London, N.W.1. 15244

WEST End London firm requires Architectural Assistant, qualified R.I.B.A., with office experience in preparation of working drawings, preferably in connection with industrial building. Write, stating qualifications, etc., and salary required, Box 8931, The Architect and Building News, or telephone Welbeck 8992. 15267

ARCHITECTURAL Assistant required in Midland County practice. Intermediate standard. Salary £500 to £580, according to capabilities.—Write stating age and experience, Box 8079, The Architect and Building News. 15273

WANTED: Architect's Assistant required for general practice, including reconstruction of large block of flats. To work in office in Regents Park, N.W.8, area—Reply, giving particulars of experience and salary required to Box 8679, The Architect and Building News. 15250

EXAMINATIONS.

I.A.A.S. FORTHCOMING EXAMINATIONS.

THE Incorporated Association of Architects and Surveyors will hold examination in the following sections during the week commencing 28th May, 1951:—

Architectural (Intermediate and Final); Quantity Surveying (Intermediate and Final); Building Surveying—Municipal (Intermediate and Final); Building Surveying—Non-Municipal (Intermediate and Final); Fire Surveying (Direct Associationship).

The normal centres for examinations are London, Birmingham, Bristol, Cardiff, Edinburgh, Glasgow, Liverpool, Norwich, Nottingham, Southampton and York.

The closing date for receipt of candidates' applications for permission to sit (which must be made on the prescribed form) will be Monday, 2nd April, 1951.

Copies of syllabuses, application forms and other information are obtainable from the Assistant Secretary, I.A.A.S., 75 Eaton Place, London, S.W.1. 15203

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ARCHITECTURAL Draughtman offers part-time service to Architects and Builders.—Phone GIPSY 5228. 15259

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STEEL framed, single story, Industrial Buildings for sale, complete with covering, 184ft. x 188ft., 188ft. x 100ft., and 188ft. x 84ft.—Sharman, 5 Victoria Street, S.W.1. Abbey 5731/2. 15014

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ARCHITECTS' Indemnity Insurance effected.—Please write for Proposal Form to

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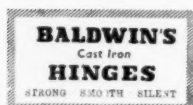
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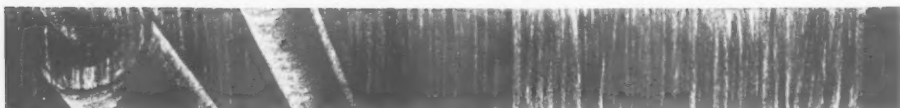
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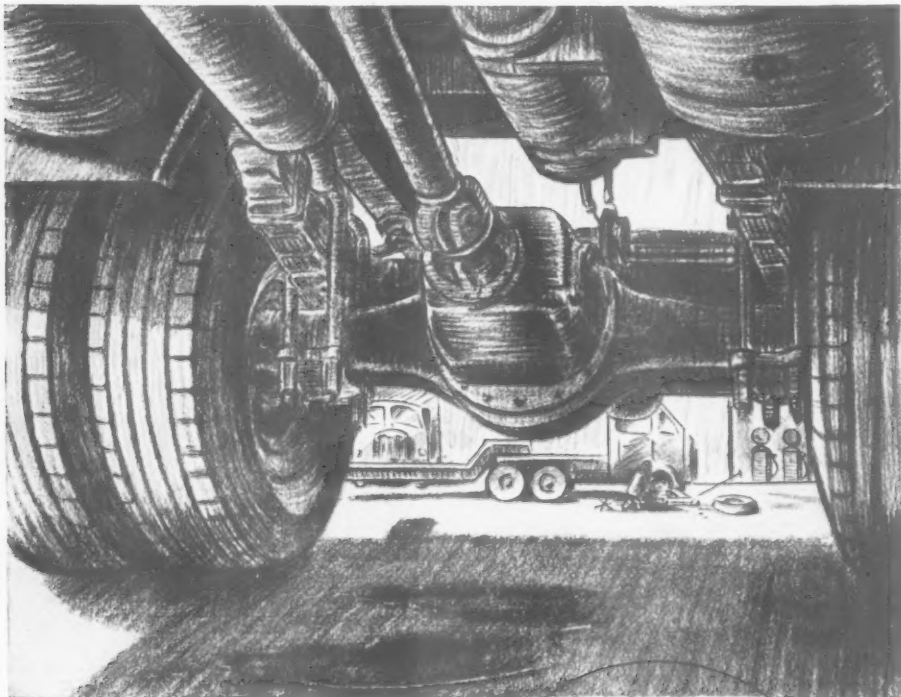
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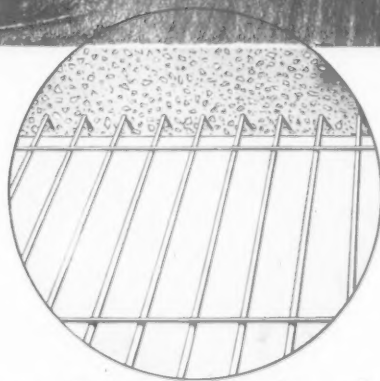
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